

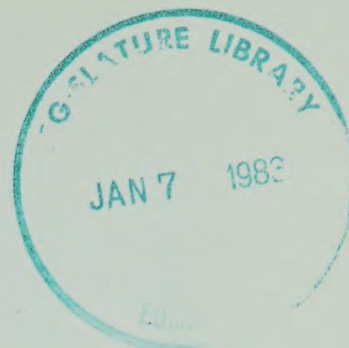
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AN ANALYSIS OF RESOURCES IN ALBERTA'S LESSER SLAVE LAKE AREA


THE
RURAL DEVELOPMENT RESEARCH BRANCH,
ECONOMICS DIVISION,
ALBERTA DEPARTMENT OF AGRICULTURE

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AN ANALYSIS OF RESOURCES

IN ALBERTA'S

LESSER SLAVE LAKE AREA

The

Rural Development Research Branch,

Victor T. Janssen, Branch Head

Economics Division,

Alberta Department of Agriculture

June 28, 1968

Resource Study No. 884 Financed Under ARDA

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Costs Shared by the Provincial & Federal Governments

Gordon Sterling, Provincial ARDA Director



The Hon. H. E. Ruste

Minister of Agriculture

Dr. E. E. Ballantyne

Deputy Minister

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RURAL DEVELOPMENT RESEARCH BRANCH

PREFACE

In Alberta economic and social development has always been a major goal of the people. Ever since the original settlers entered the territory great efforts were made to obtain a living from the natural resources which were in existence. Labour, capital and management were combined with raw resources of the land to provide constantly improved levels of living to the residents. As economic development took place over the years, social amenities such as churches, schools, and recreation facilities were also developed. Throughout this process, some areas of the province advanced more rapidly than others. In some instances the development was erratic with 'booms and busts' as various resources were exploited, new demands expanded and improved technology developed. In accordance with the location of resources and related processing and marketing, some degree of specialized production was noticeable in these areas. This overall socio-economic development was largely self-generated by the local people and the role of government was to provide a framework which permitted maximum progress.

By the 1960's, wide variation in the levels of income and employment opportunities existed between areas within Alberta as well as throughout Canada. Resources were not being utilized at optimum levels, considerable waste was occurring in soil and water management and the resulting heterogeneous pattern of socio-economic development suggested the need for a more comprehensive program to be established. It was recognized that a more active role of the local people as well as all levels of government would be necessary to achieve the objectives in this sphere. This situation was highlighted by a national conference in 1961 on Resources For Tomorrow. Papers at this meeting, delivered by authorities in the field, emphasized the gap between potential and actual accomplishments.

Culmination of the attention on the subject resulted in the Federal Agricultural Rehabilitation and Development Act of 1961. This legislation provided for joint Federal-Provincial operations and financing of programs in research, resource use and socio-economic development in rural areas. The philosophy of the act was to place government in a more active role to help the people of interested areas improve their level of living. Under the Rural Development Section of the Act, opportunity was given for government to help local people inventory their resources, analyze their own situations and outline possible methods of improving income and employment opportunities.

The Lesser Slave Lake area of Alberta is an area where resources have been depleted and some available resources have not been exploited as fully as possible. Many people in the area have become unemployed or under-employed and as a result welfare payments have risen. The Rural Development Research Branch was asked to prepare a report which would inventory the resources of the area and analyze existing conditions. This report is the result of this request. It is hoped that the report will be used by agencies working with local people, by local community organizations, and by various government departments to formulate a regional development program. Information contained herein will probably be supplemented with further study in certain areas and the projections modified as experience and policy dictates.

Knud Elgaard, Assistant Director
Economics Division

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BASIC CONCEPTS FOR THE
DEVELOPMENT OF AN AREA

by

Victor T. Janssen

and

Ken A. Svenson

BASIC CONCEPTS FOR THE DEVELOPMENT OF AN AREA

The Local Situation

The Lesser Slave Lake area is in a state of transition. At one time the forest harvest provided part-time employment for a large proportion of the labour force; commercial fishing was carried on extensively when the supply of whitefish was much greater than it is now; mink farmers had relatively easy access to cheap food and the prices of the mink pelts were higher; the necessities of life were obtained from the resources of the local area to a greater degree than is possible today.

As a result of fewer employment opportunities, a rise in the level of living which people demand, a lack of mobility of the labour force, and an increase in population, many of the people of the area have become increasingly disenchanted with their own situations. This discontent culminated in a number of requests to the Provincial and Federal Governments for remedial actions. This publication is prepared in response to this need to look at the area intensively and to provide a basis for approaching the problem.

The Goals of Development

Most of the agencies in the area are aimed at development in one form or another: The Alberta Forest Service conserves the forests and facilitates the orderly harvest of wood products by private operators; the Fish and Game Branch administers programs which are designed to conserve fish populations; the Highways Department builds roads and the Department of Education prepares the residents to become more productive citizens. Other examples could be cited as well but the above are sufficient to indicate that government, generally, is concerned with developing the country.

At this point, it may be appropriate to develop a definition of the goal of development. Dr. Benjamin Higgins, in his book Economic Development uses the following definition. He says the goal of economic development policy is:

.....maximizing the rate of expansion of production, while giving due weight to peoples' wishes regarding the choice between goods and services or leisure, between more income now and more income later, and between a higher per capita income and larger families, as expressed in collective choices made by the smallest group whose decisions can be effective in promoting growth.

Approaches to Development

Perhaps the two main ingredients of the above definition are, (1) maximizing the rate of expansion of production and (2) giving due weight to peoples' wishes. In a democracy, these are also the objectives of government. The peoples' wishes are expressed by the elected representative from the area while the resource development occurs largely through private initiative under the guidance of policies developed by the legislators with the advise of the professional civil servant. The amount of public funds expended in an area will depend, in the relatively short run, on the political judgement but in the long run, decisions must have sound economic reasons if the area is to survive and prosper.

This approach is the most efficient in terms of the number of people required to develop policies and in terms of the speed with which progress can be implemented. In addition, this approach relies heavily on the resource development specialists in the various departments who provide information needed to establish measures for maximizing the rate of economic and social growth.

On the other hand, this approach may have certain weaknesses. It is frequently stated that local people will participate more fully in programs which they have helped to develop, that their wishes are not interpreted correctly at all times, and that they can identify the needs of a community more accurately than anyone else. In addition, it has been established that when local people have an opportunity to decide how they can improve their own local conditions, it is easier to introduce programs and the programs will have a more lasting effect.

Another approach is an outgrowth of the philosophy mentioned above, and is referred to as Community Development. Dr. Higgins refers to a definition as follows:

Community Development is a process of social action in which the people of a community organize themselves for planning and action; define their common and individual needs and problems; make group and individual plans to meet their needs and solve their problems; execute these plans with a maximum of reliance upon community resources; and supplement these resources when necessary with services and material from governmental and non-governmental agencies outside the community.

Community Development is defined by the Community Development Branch, Alberta Department of Industry and Development as:

.....an educational-motivational process designed to create conditions favourable to economic and social change if possible on the initiative of the community, but if this initiative is not forthcoming spontaneously, then techniques for arousing and stimulating it in order to secure the fullest participation of the community must be utilized.

From the above definitions, this approach to development involves a much greater participation of local people to define their needs and formulate programs of self-help to solve their problems. It infers that local people can define their needs and are in a position to identify solutions to their problems. To a considerable extent this approach has been used in

the area by the Community Development Branch of the Department of Industry and Development and by the Company of Young Canadians.

The Community Development approach is said to have weaknesses, as did the government approach, as explained earlier. It would be difficult to find any approach that couldn't be improved upon.

One of the major objectives of Community Development is the improvement of the level of social welfare of the people where they are. This is a most worthwhile objective but, in the long run, the raising of expectations and the levels of social welfare may actually retard adjustment or relocation if the resource base in that specific locality is inadequate or cannot be profitably developed. The people of a particular area must be competitive with other regions to attain economic viability. The recognition of outside opportunities and comparative advantages are not always self-evident through local analysis and local community participation.

In some quarters, it is questioned whether the local people have sufficient expertise and information to identify the needs of the area and to develop corrective measures. It is argued that the professional, with additional training in specialized fields and with considerable experience, is better able to do these tasks. Finally, community involvement may be directed towards one objective in one sector of the economy, when in fact, a much broader examination of economic and social interrelationships is necessary in other sectors of the economy and on a broader geographic base.

The best approach is probably somewhere between the first and the second or between the government and peoples approaches. Its success will depend on factors such as levels of aspirations of the people, the amount of communication, the quantity and quality of natural resources in the area, and upon the amount of capital available for investment. In any event, it

would be desirable at the outset to establish some guidelines for both the professionals and lay people in order that each group is aware of their roles.

Basis for Growth

There are a number of theories which attempt to explain regional growth. This report will deal briefly with two of these: the 'economic base theory' and the 'productivity theory'.

The economic base theory has two main ideas, a market hypothesis and an opportunity hypothesis.

The market hypothesis is based on the premise that an area's growth rate is dependent on the volume of goods and services exported out of the area in relation to the imports. In this case, goods and services exported out of the area would refer to the Lesser Slave Lake area. It is suggested that only goods and services which are exported really bring wealth into the area, therefore, those industries which provide 'export' goods and services are called the wealth-producing sectors of the economy. The remainder of the economy is based on supporting the export sector which provides goods and services for the consumption of local residents, e.g. grocery store, theatre, medical clinic. The resource-producing industries may be ranked by the number of employees in each sector. The industry with the greatest number of persons engaged in the export category is called the prime mover of the economy, although not necessarily the greatest growth promoter. The market hypothesis assumes growth to be dependent on: increase of exports from the area by discovering new resources and by product promotion, increase of the area of improved land, and concentration on those products for which the area has a comparative advantage.

The opportunity hypothesis of the economic base theory assumes that

lagging growth is due to potential firms or present firms in the area being unaware of profit opportunities which may exist but which are not being exploited at the present time. The policy to follow to promote growth, then, would be to attract new firms to the area. Frequently, this is attempted by enumerating the advantages potential firms would enjoy if they came to the region. Items mentioned include industrial sites, availability of raw materials, low labour costs, transportation facilities, ready access to parks, churches and playgrounds. In other cases, the friendly attitudes towards business may be enumerated and perhaps even tax concessions given.

The productivity theory is somewhat different from the economic base concept in that it regards productivity as the fundamental determining factor of the economic growth. It also holds that the level of exports is dependent on the course of development. In essence, rather than discovering new resources and bringing in capital, the theory holds that inputs of labour and technology into the existing resources as well as new resources would promote growth. It is assumed that the economy may grow by improving the quality of the labour, applying modern technology, using more up-to-date machinery, building better schools, constructing better roads, and building a better transportation system. In short, it implies that development may be stimulated by diverting more resources into internal improvement, both real and human, from either local sources, from borrowing outside money or from increased participation of government in resource development programs. According to this theory, the way to improve growth in the area is to concentrate on the improvement of the existing economic and social system.

Export and Domestic Sectors of the Economy

The 'economic base' or the 'productivity' theories are not considered in this report to be mutually exclusive. In actual implementation, however, there will probably be more attempts to raise the productivity of workers than to increase the number of employees in the export category.

Perhaps the best use of the export-domestic theory is to more or less show why an area exists. A second use of the export-domestic theory is that the use of the data by sector, when combined with information regarding the developments which may occur in the near future, will permit some degree of forecasting. A brief explanation of this theory follows:

The export sector is that fraction of the labour force which produces goods or services for market outside the area. For instance, most of the farm produce will be marketed in other parts of Alberta or Canada or possibly in other nations, although some of the dairy products are sold locally. In effect, most of these goods are 'exported' from the area in return for dollars. Similarly, oil will be exported. Recreational activities provided for residents from outside the Lesser Slave Lake area are considered as exports as these services or goods are exchanged for tourist dollars.

The domestic sector is that fraction of the labour force which serves the markets within the area. The local retail trade, the grocery man, the barber, the doctor and the school teacher supply the local market. They do not bring wealth into the area directly but make it possible for those in the export sector to produce.

The export sector is the prime mover of the economy and the wealth producer. As employment in the export sector rises or falls, so does the employment in the domestic sector. However, employment increases in the domestic sectors are not completely dependent on the export sector.

The export sector consists of all or most of the activities in each of the following:

Farming	Recreation and Tourism
Mining	Defence
Fishing and Trapping	
Forestry	

The domestic sector consists of most or all of the activities in the following:

Retail and Wholesale
Community, Business and Personal Services
Finance, Insurance and Real Estate
Local Government

Scope

The scope of the framework required will depend on the objectives and magnitude of the investigation. In some cases, the objectives may involve only an examination of such items as policy, marketing methods, assessment rates. This could be termed "Trouble Shooting".

The framework could be expanded to include a few projects of high priority in one field. Examples might include farm consolidation, reforestation, or a training program and might be referred to as "Project Planning".

The framework may be further enlarged to the consideration of all of the adjustments required in the various sectors of the economy. In Agriculture, for instance, this approach would examine all of the factors: farm credit, economies of scale, capitalization, and perhaps ages and attitudes of farmers. It may involve projections, capital requirements, manpower training programs for a specified period of time. This might be called a "Sectoral Approach".

Framework for Planning

Initially in the ARDA program, emphasis was placed on agricultural structural adjustment and the shifting of farmers to other sectors of the economy. It was quickly evident that in a depressed area, the agricultural sector could not be isolated in terms of regional adjustments.

Consequently, all sectors have to be considered in the framework for planning.

As pointed out earlier, the wealth producing sector; eg. forestry, agriculture, manufacturing determines the amount and kinds of activities in the supporting services, such as retail trade, insurance and local government. For example, in a predominantly agricultural area, the number of farmers determines the number of storekeepers, barbers, etc. (If farm income declines, then sales by local firms will decrease.) As a consequence, in planning, more emphasis is placed on improving the production in the wealth-producing sectors, or in general terms, the primary and secondary industries. However, it is recognized that some wealth is also brought in by the tertiary industries, such as recreation and tourism.

Measurement

The plan should take into consideration the past and present uses of resources and project the future utilization of these resources. There are a number of methods used to measure the output of a region or area. Two of the methods are directly related to the previous sections and may be classed as (1) measuring total output and (2) measuring the per capita level of living. The total output or volume of goods produced could be further sub-divided into a number of groups. Examples of this type of measurement are gross regional product, gross sales for the area or for any sector within the area, total disposable income, tons of ore mined, or bushels of wheat produced.

The level of living or a welfare index is usually associated with productivity per capita. Examples of this type of measurement are per capita income, average sales per farm, average net income per farm or the disposable income per capita. Other measures of development include items such as capital-labour ratio, proportion of the labour force in agriculture

and other sectors, and the population. The actual unit of measurement which is used may not be a critical decision because in many instances a number of measures would all move together. When the total sales rise, it is likely that the employment in that particular industry would also rise. The problem is that in some cases, some of the units of measurement do not all rise in the same proportion and in fact, there are occasions when the movement of one measurement may be in opposite directions to that of another.

Employment is the most commonly used measurement because it is generally readily available for most regions. This index has some disadvantages insofar as the definition of an industry is, on occasion, difficult in the first place and secondly, the definition of a labour force has changed over time in Canada. A further disadvantage of the use of employment as a measure of economic activity is that there may be part-time employees in the labour force. Finally, using labour force perhaps may lead to an incorrect evaluation of the economy because the production per person may be considerably different from one area to another. Nevertheless, the employment approach is used in this report and an attempt has been made to take into account the above problems.

The Starting Point

The first task in assessing the potentials for development is an examination of the resources of the area. Some of the basic information relative to the resources of the Lesser Slave Lake area is contained in this report. Additional information is available in other publications, most of which are summarized by Banta for the Human Resources Development Authority.^{1/}

In this report each sector is analyzed to determine the probable growth, and

^{1/} Banta, Gordon; A Survey of Problems in the Lesser Slave Lake Area, A study for the Human Resources Development Authority, Edmonton, 1968 - (unpublished).

the expected employment. It may be possible to significantly increase the employment listed below by attracting new industries. Conversely, continued low prices for mink pelts, forest fires or adverse climatic factors may decrease the employment in some of the sectors.

The starting point now is for the local people and government agencies to examine the material in the report, discuss projects which might increase the quantity of employment as listed, and formulate adjustment programs to ensure an improvement in the economy of an area.

An example of 'labour force balance' showing projections which could be used as a basis for a development plan is as follows:

(For I.D.'s 123, 124, 125, 127, and 128.)

	<u>Employment 1961</u>		<u>Projected 1/ Employment 1981</u>	
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>
Agriculture	747	23.6	600 (1)*	14.0
Forestry			590 (2)	13.7
Fishing	549	17.3	50 (3)	1.2
Trapping			15 (4)	.3
Mining	191	6.0	200	4.6
Manufacturing	235	7.4	400 (5)	9.3
Construction	192	6.1	331 (6)	7.7
Transportation, Communication and Utilities	273	8.6	293 (6)	6.8
Trade	331	10.5	560 (6)	13.0
Finance, Insurance and Real Estate	21	.7	86 (6)	2.0
Business, Personal and Community Services	537	17.0	891 (6)	20.7
Public Administration and Defence	90	2.8	288 (6)	6.7
<u>TOTAL</u>	<u>3,166</u>	<u>100.0</u>	<u>4,304</u>	<u>100.0</u>
Total Population	12,372		20,543 (7)	
% of Population Employed in Area	25.6		21.0	

* See following page for code.

1/ The 1981 employment figures do not include estimates for new major industrial firms, except as stated in the footnotes.

	<u>Employment 1961</u>		<u>Employment 1981</u>	
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>
% of Population Employed in Alberta	36.8			
Surplus of Labour Force - Number of persons	1,483		3,238	
Surplus of Population *	4,029		8,798	

* The Alberta ratio of population to labour force is taken as a standard.

Footnotes

- 1) Based on 400 farms @ 1.5 persons per farm.
- 2) 520 men for a logging season of 100 days - 520
70 forestry resource personnel

<u>70</u>
590
- 3) Anticipated total revenue of \$350,000 is divided by a gross income per fisherman of \$7,000 to provide employment for 50 persons.
- 4) Anticipated total revenue of \$90,000 is divided by a gross income per trapper of \$6,000 to provide employment for 15 persons.
- 5) Sawing and planing for a 150-day season - 290 persons.

Wood products manufacturing plant	100	"
Miscellaneous manufacturing	10	"
	<u>110</u>	
	400 persons	
- 6) Employment in the tertiary industries and in construction is based on the percentage of these categories in the labour force in the Red Deer area for 1961.
- 7) The figure of 20,543 is derived from projections published by the Provincial Planning Branch: Population I - Trends. This is the conservative estimate available. (See "Population Characteristics")

Manpower Problems

The above table illustrates one of the problems which is evident in the Lesser Slave Lake area. This is the problem of too few jobs for the number of people or, conversely, too many people for the number of jobs. In 1961, it is estimated that there were 4,029 too many people in the area for the jobs that were available. Projections of developments which could occur in the Lesser Slave Lake area provide an estimated labour force of 4,304 people. If a conservative population projection based on past trends

is used, there will be a labour force surplus of 3,238 people by 1981 and a surplus population of 8,798 people. It is evident that if the area is to be economically viable that, in spite of anticipated industrial development a large number of people will have to leave the area.

One program that obviously will be needed, will be a comprehensive manpower program, if people of the Lesser Slave Lake area are to compete successfully for jobs within the area or in areas to which they may migrate. Should new job opportunities appear in the area as a result of new industries settling there, ideally, the existing labour force should take advantage of these opportunities. Regardless of the spatial adjustment to the labour force, (ie. whether a large percentage migrates or remains in the area) a training program will be essential.

A comprehensive manpower program should include the following elements:

1. Recruitment - efforts which inform the unemployed and underemployed that assistance is available in a form which is beneficial to them -
2. Intake procedures - which induct the applicant into the program with a minimum of delay and complexity and a maximum of emotional support from the agencies involved and from the family -
3. Evaluation - an assessment of the individual and family capacities, aptitudes, needs, resources, interests and desires - planning proceeds from here to develop a program best suited to the conditions of the family or individual concerned -
4. Basic education - for those who need training in reading, writing, speech and arithmetic skills -

5. Pre-vocational training - training to prepare for specific vocational or technical training -
6. Skill training - can take many forms from a vocational or technical school to on-the-job training -
7. Placement - assistance which identifies job opportunities and places prepared people in these jobs -
8. Follow-up System - people placed in jobs receive continued support and assistance in adjusting to the job situation and in developing understanding and communication between employee and employer -
9. Supporting services - all through the program people may need assistance in the form of counselling, medical services, day care facilities, housing, transportation, legal aid, financial support, and other areas to ensure that there are no dropouts because of some special need which the program has not met -
10. Job Development - a continual examination of job potentials and ways to develop new industries and use resources more effectively -
11. Evaluation - the total program needs to be continually evaluated and changes made when weaknesses become evident.

All of the above elements need to be combined in a way that fits the needs of people in the Lesser Slave Lake area, no one agency can do this alone. The job will require the assistance of all government agencies, private business and local people to design and operate such a program.

The problems of low education levels are discussed later in this report under the heading of "Education in the Lesser Slave Lake Area."

THE HUMAN RESOURCES
OF THE
LESSER SLAVE LAKE AREA

by

Ken A. Svenson

POPULATION CHARACTERISTICS OF THE LESSER SLAVE LAKE AREA

The population of the Lesser Slave Lake area increased from 11,384 persons in 1956 to 14,888 persons in 1966. This is an increase of 30.8% or approximately 3.0% per year. However, 1956 to 1961 was a period of slower growth than the 1961-66 period. Between 1956 and 1961 the population increased about 2.1% per year while between 1961 and 1966 the population increase was about 3.6% per year. Most of the growth occurred in the towns in the area while many of the rural areas actually lost population. The population of I. D. 124 declined from 3,216 in 1956 to 2,732 in 1966 which is a loss of 15.0%. I. D. 125 and I. D. 129 both decreased in population while I. D. 123 and I. D. 128 increased in population. All the towns and villages increased in population as did the Indian reserves, although the population of the Indian reserves did decrease between 1961 and 1966. The population changes in the Lesser Slave Lake area between 1951 and 1966 are shown in the table below:

Table 1 POPULATION BY SUBDIVISIONS ^{1/}
OF LESSER SLAVE LAKE AREA
1951 - 1966

	<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u>
I. D. 123	1	2	279	86
I. D. 124	2,853	3,216	3,108	2,732
I. D. 125	3,277	3,155	3,212	3,101
I. D. 128	593	947	769	1,100
I. D. 129	502	877	577	712
High Prairie	1,141	1,743	1,756	2,241
Kinuso	238	306	323	376
Swan Hills	-	-	643	1,414
Slave Lake	-	-	468	1,716
Indian Reserve Unavailable		1,140	1,453	1,410
<u>Totals</u>	<u>8,605</u>	<u>11,384</u>	<u>12,588</u>	<u>14,888</u>

^{1/} Census of Canada 1961 Bulletin 1.1-10, 1966 Bulletin 1 (1-6).

Table 1 shows that there was a significant increase in population in the area between 1961 and 1966. Other sections of this report (e.g. "Primary Industries") indicate that the general increase in population exceeded that increase which could be expected from labour force demand. It could be expected that the increase in population could come from two sources. The one source is from the relatively high birth rate coupled with the lack of out-migration and the second source is the in-migration of people in the labour force to fill jobs for which people residing in the area did not have the necessary skills.

Table 2 shows the population of Lesser Slave Lake area by selected age groupings and allows comparisons to be made with C. D. 15 and Alberta. The under 5 age group is used to measure the fertility ratio of a population. The fertility ratio is the number of children under five per 1,000 women 15-45 years of age. The fertility ratio for the Lesser Slave Lake area in 1966 was 888 per 1,000 women of childbearing age compared with 768 for C. D. 15 and 581 for Alberta. Fertility ratios for the Indian reserves of the Lesser Slave Lake area was 1,095, for the rural population it was 941 and for the towns and villages, 789 per 1,000 women of childbearing age.

The age group 5-24 years is the group that should contribute most to school attendance. Most of the people attending school in the Lesser Slave Lake area will be under 20 years of age because there are no facilities for post-high school training. Relative to the total population there are more people in the school-attending age category than in Alberta or C. D. 15.

The age group 20-34 years is the time when people are generally most mobile. People in this age category are leaving home to find work and to gain an education. This is also the group that is beginning to establish new families. If the Lesser Slave Lake area were an area of high out-migration then it could be expected that there would be relatively few people in this

age category. In Alberta, 13.3% of the total population is between 20 and 34 years and in C. D. 15, 13.4% of the population is in this category. However, in the Lesser Slave Lake area 21.2% of the population is between 20 and 34 years. This is a much higher proportion than the Alberta average. The Indian reserves of the area have 18.9% of the population in this category and this is slightly lower than the area average but higher than the provincial average. The towns and villages of the area with 27.2% of the population in this category, have an even higher average than the rest of the area. There are two towns in the area which have grown rapidly in the 1961-66 period and this could account for the large proportion in the towns in this age group but this does not account for the high proportion in the rural parts of the area.

The 15-64 age group is usually considered the age group in the labour force. Areas with high per capita incomes usually have a high proportion of the population in the labour force and a low proportion in the dependent age groups. In Alberta, 57.9% of the total population is in the 15-64 year category while in the Lesser Slave Lake area, 51.9% are in this category. There are fewer on the Indian reserves (45.8%) and the rural portions of the area (50.4%) while the towns and villages have a few more (55.3%).

The age group 65 and over is the time of life when people are retired or about to retire. It is also considered a dependent age group. The Lesser Slave Lake area has relatively fewer people in this age category than Alberta and C. D. 15. This relationship and the others mentioned above are shown on the following page.

Table 2 POPULATION BY SELECTED AGE GROUPS
ALBERTA, C. D. 15, LESSER SLAVE LAKE AREA, INDIAN RESERVES
TOWNS AND VILLAGES - 1966 1/

Age Group	Alberta		Lesser Slave Lake Area		Indian Reserves		Other Rural Areas		Towns & Villages		C. D. 15	
	#	%	#	%	#	%	#	%	#	%	#	%
Under 5	173568	11.9	2472	16.6	265	18.8	1252	16.2	955	16.6	12742	14.4
5-24	568202	38.9	6462	43.4	700	49.6	3406	44.1	2356	41.0	37108	42.0
20-34	194205	13.3	3156	21.2	266	18.9	1327	17.2	1565	27.2	11862	13.4
15-64	847978	57.9	7718	51.9	646	45.8	3895	50.4	3178	55.3	47900	54.2
65+	104010	7.1	693	4.6	62	4.4	414	5.4	217	3.8	5008	5.7
Total	1463203		14888		1410		7731		5747		88344	

The relatively low proportion of the population in the productive age group (15 - 64 years) and the relatively high proportion of the population in the non-productive age groups (under 15 years and over 64 years) means that there are relatively fewer people to bring income to the area, relatively fewer people to pay taxes and relatively more people to support from existing income and taxes. This means that the per capita income will be low and the taxes per taxpayer relatively high. It also means that there are relatively fewer people to fill the leadership positions in government and community organizations and this fact places a greater burden on the few who are available.

If the population of the Lesser Slave Lake area were to continue to grow at the same rate that it has grown from 1961-1966, the total population could be expected to reach 24,629 by 1981. However, the 1961-1966 period was a period of relatively rapid growth in population. If the 10-year period 1956-1966 is used as a base, the population could reach 22,466 by 1981. The Planning Branch of the Department of Municipal Affairs has also published some projections by municipality. The population projections made by the Planning Branch do not include Indian reserves so an estimate of 1,500 was added to

1/ Dominion Bureau of Statistics data, special tabulations.

to their projections to include the Indian reserves. With the Indian reserves included in the projections made by the Planning Branch, it is estimated that the population could reach 20,543 by 1981. This is the most conservative of the three estimates. These estimates are shown in Table 3:

Table 3 POPULATION PROJECTIONS FOR THE LESSER SLAVE LAKE AREA

Year	Municipal Affairs Projections	1961-1966 Trend	1956-1966 Trend
1956	11,384	11,384	11,384
1961	12,588	12,588	12,588
1966	14,888	14,888	14,888
1971	-	17,608	17,179
1976	-	20,825	19,470
1981	20,543*	24,629	22,466

* This figure includes projected populations by the Planning Branch, Department of Municipal Affairs for I. D. 123, 124, 125, 128, 129, the towns of Swan Hills, High Prairie and Slave Lake and the Village of Kinuso plus an estimate of 1,500 for Indian Reserves made by the Rural Development Research Branch, Economics Division, Alberta Department of Agriculture.

If the most conservative estimate of 20,543 and the same relative proportions by age group as shown in Table 2 for the Lesser Slave Lake area is used then the age groups can be estimated for 1981 as shown in the table below:

Table 4 PROJECTED POPULATION BY SELECTED AGE GROUPS
LESSER SLAVE LAKE AREA-1981

Age Group	%	#
Under 5	16.6	3,409
5-24	43.4	8,912
20-34	21.2	4,353
15-64	51.9	10,657
65+	4.6	945
Total Population	100.0	20,543

Table 5 POPULATION BY AGE GROUP AND SEX ^{1/}
LESSER SLAVE LAKE AREA*
1966

Age Group	Total		Male		Female	
	#	%	#	%	#	%
0- 4	2,472	16.6	1,263	8.5	1,209	8.1
5- 9	2,232	15.0	1,141	7.7	1,091	7.3
10-14	1,773	11.0	893	6.0	880	5.9
15-19	1,326	8.9	678	4.5	648	4.4
20-24	1,131	7.6	577	3.9	554	3.7
25-34	2,025	13.6	1,076	7.2	949	6.4
35-44	1,461	9.8	829	5.6	632	4.2
45-54	991	6.7	539	3.6	452	3.1
55-64	784	5.3	443	3.0	341	2.3
65-69	273	1.8	168	1.1	105	0.7
70+	420	2.8	244	1.6	176	1.2
Total	14,888	100.0	7,851	52.7	7,037	47.3

EDUCATION IN THE LESSER SLAVE LAKE AREA

Introduction

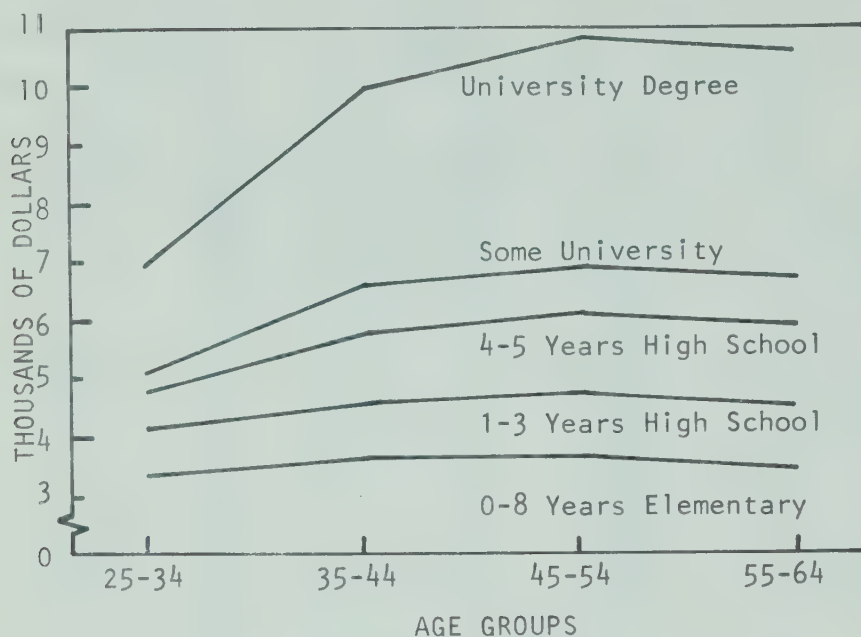
Education has traditionally been viewed as being of intrinsic and extrinsic value but it is only recently that statistics have become available so that some measurement of its extrinsic value is possible. The statistics enable measurements to be made on the basis of increased incomes and increased productivity. The more education a person receives, the greater his income. This relationship is illustrated in Figure 1.

* Lesser Slave Lake area includes I. D.'s 123, 124, 125, 128 & 129, Village of Kinuso, Towns of Swan Hills, Slave Lake, High Prairie and all Indian reserves in that area.

^{1/} Census of Canada, Special Enumeration Area Tabulations.

Figure 1

INCOMES BY AGE GROUP AND EDUCATION LEVEL
MALE NONFARM LABOR FORCE, 1961^{1/}



The Economic Council of Canada estimates that for every dollar a student spends on his education, he receives about 17 1/2¢ per year. This is 17 1/2% per year return on his original investment including foregone income. ^{1/}

The person with more education receives a higher income because the education enables him to produce more of that which is valued by society than a person with less education. Because of his greater productivity, society can afford to pay him a higher salary. Society can afford to pay a highly educated or a highly skilled person a high salary because society, in general, benefits from the additional productivity of that individual. Industry today needs highly qualified management and production workers in order to expand productivity which brings increased wages, salaries and profits and also an increase in the amount of taxes paid. It has been estimated that society receives about 12 1/2% per year on its original expenditures on education. ^{2/}

This return does not all come to the local community but comes to society in

^{1/} The Rural Development Research Branch; The B-12 Plan, Economics Division, Alberta Department of Agriculture, Edmonton, 1968 (unpublished).

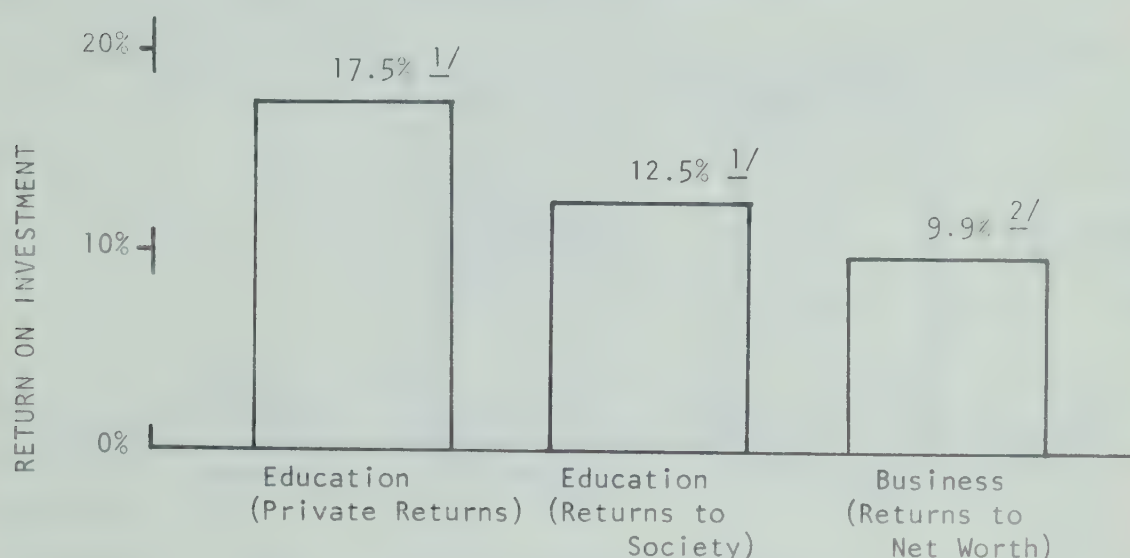
^{2/} Ibid.

general.

Since the average return in 1965 on private business investment was about 10%, it is evident that public expenditure on education is an economically sound one. This is illustrated in Figure 2:

Figure 2

EDUCATION AND BUSINESS INVESTMENTS COMPARED - 1965 ^{1/}



The profitability comparison does not imply that the local community receives 12 1/2% on its original investment in education. This is because many young people who are educated in one community move to another to work, to live, and to pay taxes. Areas which have a high rate of out-migration of young people may not receive this return and may even lose money on the investment while other areas may receive extra benefits. The profitability comparisons are returns to the whole of society.

The practical value of education is further documented by the fact that unskilled workers are out of work more often than are skilled workers and

^{1/} The Rural Development Research Branch; The B-12 Plan, Economics Division Alberta Department of Agriculture, Edmonton, 1968 (unpublished).

that young, inexperienced workers are more often unemployed than are older more experienced workers. These relationships are illustrated in Figure 3 and Figure 4. It is evident that young, inexperienced workers with little education will be unemployed much more frequently than older, experienced, and better educated workers.

Figure 3 PER CENT OF WORKERS UNEMPLOYED IN CANADA ^{1/}
ONCE OR MORE IN THE YEAR 1964

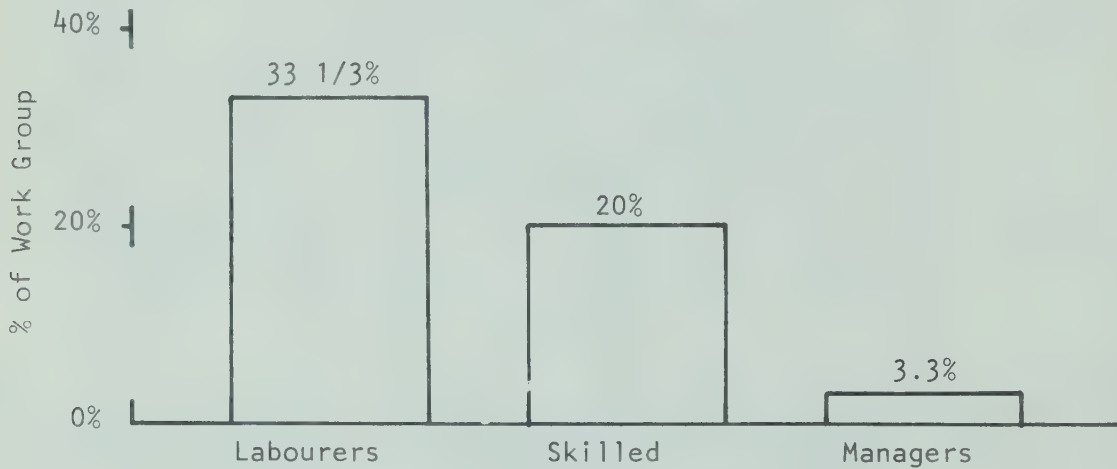
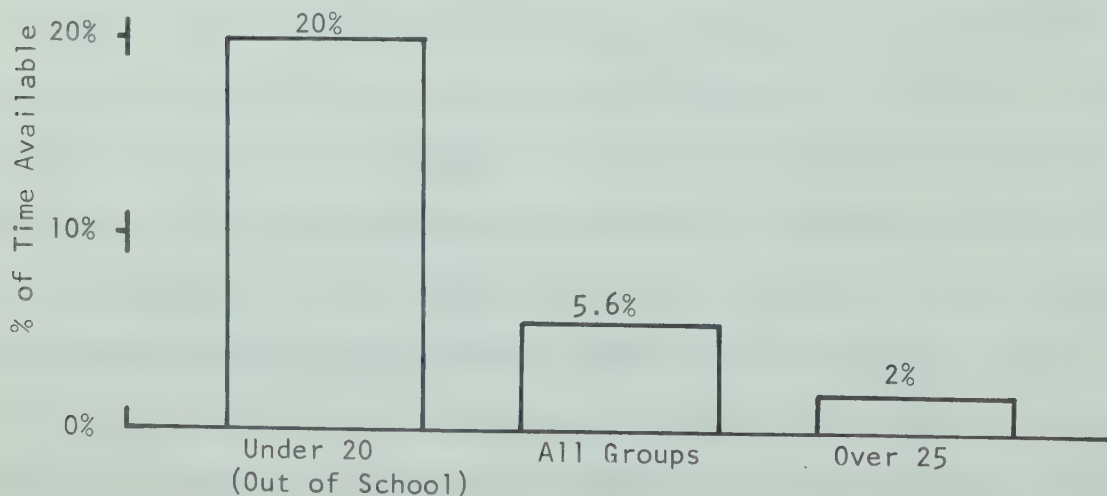


Figure 4 TIME LOST THROUGH UNEMPLOYMENT IN CANADA-1964
(AS A % OF ALL TIME AVAILABLE)



^{1/} Ostry, Sylvia, "Statistical Study Underlines Unsure Position of Unskilled" Financial Times of Canada, Vol. 56 No. 52, Montreal, May 13, 1968. (Abstract from monograph in labor force studies series, catalogue Number CS-99-522-1968) Queen's Printer, Ottawa.

Level of Education

In 1961, there were 6,047 people in the southern Lesser Slave Lake area (I. D. 123, 124, 125 in the towns and villages within the boundaries of these areas)* who were over 5 years of age but not attending school. Of these people, 64.6% had only an elementary education or less as compared with 59.6% for all of C. D. 15 and 47.0% for all of Alberta. More detailed statistics are shown in the table below.

Table 6 POPULATION 5 YEARS OF AGE AND OVER NOT ATTENDING SCHOOL
BY HIGHEST GRADE ATTENDED
1961

	Southern Lesser Slave Lake Area		C. D. 15		Alberta	
	#	%	#	%	#	%
Total	6,047	100.0	45,814	100.0	832,906	100.0
No School	888	14.7	5,473	11.9	58,434	7.0
Pre-School	4	0.1	33	0.1	1,001	0.1
Elementary 1-4 Years	835	13.8	4,632	10.1	44,866	5.4
Elementary 5+ Years	2,178	36.0	17,193	37.5	253,959	30.5
High School 1-2 Years	1,066	17.6	9,051	19.8	190,916	22.9
High School 3-4 Years	707	11.7	6,402	14.0	184,302	22.2
High School 5 Years	163	2.7	1,133	2.5	43,479	5.2
University 1-2 Years	131	2.2	1,123	2.4	25,220	3.0
University 3-4 Years	30	0.5	265	0.6	6,662	0.8
University Degree	45	0.7	509	1.1	24,067	2.9

It is evident that education levels are lower in the Lesser Slave Lake

* Other Statistics for the Lesser Slave Lake area also include I. D. 128 and 129. Statistics on these two areas were not available for 1961 at the time of publication.

area than in the rest of C. D. 15 and in Alberta. People from this area will probably find it difficult to compete with the people from other areas for skilled jobs because of their lack of education. This points up the need for additional training in order that these people will be able to compete successfully in the labour market.

In the labour market today, jobs which require little training and skill are declining in number, while jobs which require more training and skill are increasing. Changes in technology increase the complexity of the jobs available and thus increase the training requirements for these jobs. Rapid changes in technology also require people who are adaptable and have the ability to continually learn new techniques and methods. Prospective employers look for educated employees because through education, these people have acquired learning abilities and skills which enable them to make use of the technology that is available and to adapt to the changes which may occur in the future.

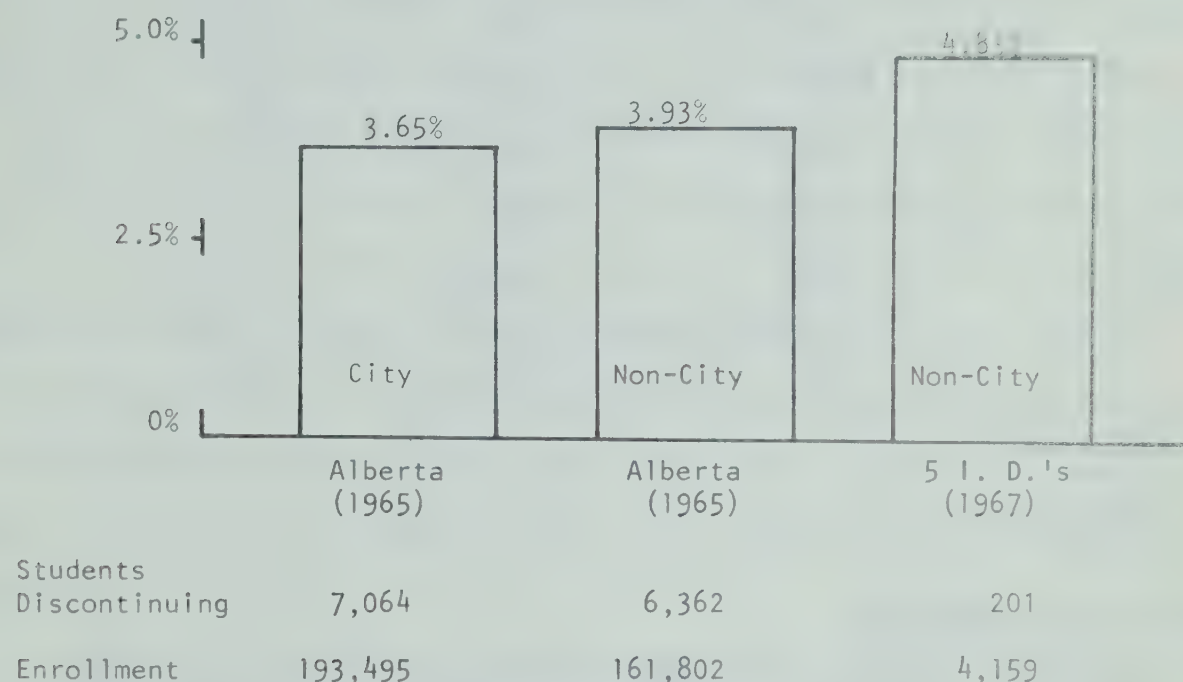
The present school system should be preparing students to compete successfully in the labour market in the future or so that they can go on to further training elsewhere. In the Lesser Slave Lake area in 1967 there were 4,159 students attending school, but 1966 Census of Canada indicates that there were 6,462 people between the ages of 5 and 24 years, in the same area. In the Lesser Slave Lake area there were 64.4% of the people between 5 and 24 years who were attending school compared with 65.1% for Alberta (1965).^{*} There is only a slightly lower proportion of the population attending school in the Lesser Slave Lake area than in Alberta.

Students leave school in the Lesser Slave Lake area at a slightly faster rate than they do in the rest of Alberta. In the Lesser Slave Lake area

^{*} The Alberta Statistics quoted in the remainder of this section are for 1965 because the 1967 statistics were not available at the time of publication.

about 4.8% of the enrolled students left school for destination other than further education while in rural Alberta 3.9% left and in the cities of Alberta 3.6% discontinued their education. This is shown in the figure below:

Figure 5 PER CENT OF ENROLLED STUDENTS QUITTING SCHOOL



Although there is only a slight difference in the population of the school age in school and the rate at which students leave school between the Lesser Slave Lake area and the rest of the province, there is a significant difference in the level of education attained by those who leave school. In the Lesser Slave Lake area 56.3% of the people leaving school have Grade 9 or less compared with 26.1% for rural Alberta and 10.4% for the cities of Alberta. Only 19.4% of the students leaving school in the Lesser Slave Lake area have Grade 12 compared to 47.2% for rural Alberta and 65.5% for the cities of Alberta. These comparisons are shown in more detail in the table on the following page.

Table 7 PERCENTAGE OF STUDENTS LEAVING SCHOOL BY
 HIGHEST GRADE ATTENDED^{1/}

	<u>Lesser Slave Lake Area*</u>	<u>Rural Alberta**</u>	<u>Cities of Alberta**</u>
Less than VI	1.5	2.2	0.3
VII	5.0	3.4	1.2
VIII	7.5	6.7	2.5
IX	42.3	13.8	6.6
X	12.9	10.4	9.7
XI	11.4	16.3	14.2
XII	19.4	47.2	65.5
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

* 1967 Statistics

** 1965 Statistics

Facilities for Education

There are 21 schools with a total of 202 rooms in the Lesser Slave Lake area. Six of these schools teach Grades 1-12 while the rest of them have from Grades 1-6 to Grades 1-9. Driftpile has only Grades 1-3. Many of these schools are in Northland School Division and are generally small, isolated schools. The Grouard school of the Northland School Division has a vocational as well as an academic program. It also has residential facilities and students from other smaller schools frequently transfer to Grouard to complete their high-school education. Schools in the Lesser Slave Lake area average 20.6 students per room compared with 27.1 students per room as an average for all Alberta schools.

^{1/} Students leaving school for all destinations other than further education.

Teachers

There are a total of 198 teachers in the Lesser Slave Lake area. This is an average of 21 students per teacher. The average for all Alberta schools is also 21 students per teacher.

Statistics for the number of years of training and for numbers of resignations are given on a school division basis only so the following statistics are for the High Prairie School Division Number 48 and the Northland School Division Number 61. The High Prairie School Division includes the populated areas of I.D. 124 and 125 and M. D. 130. Northland School Division includes most of the isolated communities in northern Alberta. There were a total of 318 teachers in these two school divisions in 1967 and 60 of them had 4 years or more university training. This is 18.9% of the total number of teachers which compares with approximately 38%, the Alberta average in 1965. If the High Prairie School Division is considered alone then 21.3% of the teaching staff has at least 4 years of university education.

Teachers' resignations are also higher in the Lesser Slave Lake area than in Alberta generally. In this area in 1967, about 1/3 of the teachers resigned while the Alberta average in 1965 was 17%. This is shown below:

Table 8

TEACHER RESIGNATIONS ^{1/}
SCHOOL DIVISIONS 61 & 48 FOR 1967
ALBERTA AND CITIES-1965

	High Prairie # 48	Northland # 61	Total High Prairie & Northlands	Alberta 1965	Larger Cities 1965
Total Staff	146	172	318	-	-
Resignations	46	60	106	-	-
% Resigning	31.5	34.9	33.3	17	11

^{1/} Alberta Department of Education

Operating Expenditures

Operating expenditures per student have been calculated in order to facilitate comparisons. Total operating expenditures per student are shown below:

Table 9 TOTAL OPERATING EXPENDITURES PER STUDENT ^{1/}
LESSER SLAVE LAKE 1967

	<u>Northlands</u>	<u>High Prairie</u>	<u>Total Northlands & High Prairie</u>	<u>*Alberta 1966</u>
Total Expenditure	2,977,583	1,953,881	4,931,464	191,383,845
Number of Students	3,522	3,307	6,829	365,002
Expenditure Per Student	845	591 ^{2/}	722	524

* The latest figures available for Alberta are for 1966.

Operating expenditures are much higher for Northland School Division and a little higher for the High Prairie School Division than the Alberta average. Northland operates under special conditions and so expenditures could be expected to be high.

Frequently, a large part of the operating expenditures for rural schools is in the area of transportation and pupil maintenance, (room and board assistance in lieu of transportation). Table 10 shows comparisons of operating expenditures with expenditures for transportation and maintenance excluded:

^{1/} Abstracted from records of Alberta Department of Education.

^{2/} Expenditure per student in High Prairie in 1966, was \$514.00

Table 10

OPERATING EXPENDITURES EXCLUDING TRANSPORTATION & PUPIL MAINTENANCE

LESSER SLAVE LAKE AREA 1967 ^{1/}

	Northlands	High Prairie	Northlands & High Prairie	Alberta* 1966
Expenditures	2,742,883	1,715,041	4,457,924	177,468,020
Number of Students	3,522	3,307	6,829	365,002
Expenditure Per Student	779	519 ^{2/}	653	486

* The latest figures available for Alberta are 1966

Unemployment

Students in the Lesser Slave Lake area who leave school find it more difficult to obtain employment than students in other parts of Alberta. Post-school records show that 31.6% of the students who leave school to enter the labour force in the Lesser Slave Lake area become unemployed compared with 4.7% for rural Alberta and 4.8% for the cities of Alberta. Post-school records also show that the less education possessed by a new entrant into the labour force the harder it is for him to find a job. Details of these relationships are shown in Table 11.

^{1/} Abstracted from records of Alberta Department of Education.

^{2/} Expenditure per student in High Prairie for 1966, was \$446.00.

Table 11

UNEMPLOYMENT AMONGST NEW ENTRANTS INTO THE LABOUR FORCE ^{1/}

(a) Highest Grade Attained	Number To Labour Force		
	Total	Unemployed	
		No.	%
5 I. D.'s (1967)			
Less than Grade VII	1	1	100.0
Grade VII	11	6	54.5
Grade VIII	8	3	37.5
Grade IX	60	21	35.0
Grade X	20	4	20.0
Grade XI	17	2	11.8
Grade XII	33	-	-
Total	117	37	31.6
(b) Alberta (Non-City) (1965)			
Less than Grade VII	72	15	20.8
Grade VII	154	23	14.9
Grade VIII	308	38	12.3
Grade IX	645	54	8.4
Grade X	489	22	4.5
Grade XI	806	37	4.6
Grade XII	2,601	49	1.9
Total	5,075	238	4.7
(c) Alberta (City Districts, 1965)			
Less than Grade VII	8	1	12.5
Grade VII	53	5	9.4
Grade VIII	113	22	19.5
Grade IX	328	42	12.8
Grade X	497	32	6.4
Grade XI	783	54	6.9
Grade XII	3,816	110	2.9
Total	5,598	266	4.8
(d) Average unemployment for the Alberta labour force during 1965			2.6

^{1/} Abstracted from records of Alberta Department of Education.

Summary

In the Lesser Slave Lake area educational levels are low, people leave school early and frequently leave school to become unemployed. The cost of operating schools is also higher than the Alberta average. Teacher resignations are high and teacher training is low. The results obtained for the money spent on education is much below the Alberta average.

HEALTH IN THE LESSER SLAVE LAKE AREA

The population of the Lesser Slave Lake area is served by two health units. I. D. 124 is served by the Athabasca Health Unit (Number 18) which also serves the County of Athabasca and Improvement Districts 102, 107, and 122. The towns and villages in this area are also served by the health unit. I. D. 124 and I. D. 125 are served by the Peace River Health Unit (Number 21) which also serves M. D. 130, 135 and 136 and Improvement Districts 138, 139 and 146 as well as all towns and villages in that area. Improvement Districts 123 and 128 were not served by health units in 1966. The town of Swan Hills is served by a municipal nurse who travels from Fort Assiniboine. The Wabasca area is served by the Wabasca Municipal Nursing Service which employs two nurses. There is a municipal nurse who works under the Athabasca Health Unit at Kinuso and there is a municipal nurse from the Peace River Health Unit at Atikameg. There is an arrangement between the federal and provincial governments in the Wabasca area in which the municipal nurses there supply medical services to the Indian people.

There are 9 nurses (public health and municipal) in the Athabasca Health Unit who serve a population of 22,730 (in 1966). This is a ratio of 2,525 persons for every nurse. The Peace River Health Unit has 9 public health and municipal nurses serving a population of 35,664 which is 3,963 people for every nurse. The Department of Public Health gives the nurse to population

ratio as 1:3, 107 and 1:4, 257 respectively with the municipal nurses and the population they served excluded. Excluding the cities of Edmonton and Calgary, there are 751,242 people served by Health units and these units are staffed by 158 nurses (including municipal nurses). ^{1/} This is a ratio of 4,755 people for every nurse. The Athabasca and Peace River Health Units compare favourably with this Alberta average. Although the headquarters for these health units are located in Athabasca and Peace River respectively the Athabasca Health Unit has a sub-office in Slave Lake and the Peace River Health Unit has a sub-office in High Prairie.

There are 8 medical doctors in the Lesser Slave Lake area. Two of these are located at Slave Lake and the remaining six at High Prairie. One of the Slave Lake doctors makes weekly visits to Wabasca. Eight doctors serve a population of 14,888 in the Lesser Slave Lake area which is a ratio of 1,861 people for every doctor. The Alberta average is 894 people for each doctor (1965). There are no dentists in the Lesser Slave Lake area.

The incidence of selected diseases in the two health units serving the Lesser Slave Lake area is compared with Alberta in Table 12. The Peace River Health Unit reported the location of some diseases, and where this was done, it is shown in the column headed Western Lesser Slave Lake area. The rates for dysentery, infectious hepatitis, tuberculosis and venereal disease are much higher in the two health units than in Alberta generally. The rates for infectious hepatitis, scarlet fever and strep throat and venereal disease for the western Lesser Slave Lake area are more than double the rates for these diseases in the Peace River Health Unit of which it is a part.

^{1/} Department of Public Health; Annual Report, Edmonton, p. 36.

Table 12 RATES PER 100,000 POPULATION FOR SELECTED DISEASES
BY HEALTH UNIT, ALBERTA AND THE WESTERN LESSER SLAVE LAKE AREA
1966 ^{1/}

	Athabasca	Peace River	Western Lesser* Slave Lake Area	Alberta
Bacillary Dysentery	112.0	31.6	-	20.5
Food Poisoning	22.3	11.2	-	13.2
Infectious Hepatitis	94.2	46.0	90.2	37.6
Measles	1134.8	993.9	391.0	459.3
Rubella	67.3	40.2	-	57.5
Scarlet Fever & Strep Throat	80.7	120.6	360.9	116.8
Tuberculosis	85.2	40.2	-	20.7
Venereal Disease	633.5**	557.9**	1278.2	249.6***

* Includes I. D. 125, 129 and the Town of High Prairie and the rates shown are from statistics given in the 1966 Annual Report of the Peace River Health Unit.

** Calculated from statistics given in the Annual Report of the Athabasca Health Unit and the Peace River Health Unit, 1966.

*** Calculated from statistics given in the Annual Report of the Department of Public Health 1966, p. 91.

The Peace River Health Unit's Annual Report for 1966 makes the following statement in relation to the seriousness of the infectious disease problem:

The table when coupled with the results of housing surveys conducted by the health unit in this area indicates both the widespread mortality from bowel infections especially in the early years of life, and also that the highest incidence is concentrated in areas where housing is deplorable and sanitation and water facilities negligible.

The association of ill health and poor environmental circumstances is once again underlined and visible to all who wish to see it. These young Canadian citizens are having a poor start in life, many in squalid surroundings, and it would seem that only physical isolation and severe climatic conditions prevent a serious outbreak of infectious disease in this area. If and when the population density increases, then in the absence of any improvement in the circumstances of their living - an outbreak seems inevitable. 2/

1/ Annual Report of the Department of Public Health, 1966, p. 22.

2/ Annual Report, Peace River Health Unit, 1966, p. 16.

In 1966, High Prairie had the only hospital in the Lesser Slave Lake area. A hospital opened at Slave Lake in March 1968. The capacities of these hospitals are shown in Table 13.

Table 13 HOSPITAL BED CAPACITY AND NUMBER OF PATIENT DAYS ^{1/}
1966

	<u># of Beds</u>	<u>Bassinets</u>	<u>Patient Days</u>	<u>New Born Admissions</u>
High Prairie	72	16	19,651	311
Slave Lake	34	7	(Opened in March, 1968)	
All Alberta Hospitals	9,405	1,666	2,459,388	29,805

In 1966, the Lesser Slave Lake area had 72 beds serving a population of 14,888 persons or an average of 207 persons per bed. The Alberta average is 155 persons per bed. With the addition of the hospital at Slave Lake the ratio of population to beds is now 140:1 which is quite comparable to the Alberta average.

WELFARE IN THE LESSER SLAVE LAKE AREA

Introduction

There are three regional offices of the Department of Public Welfare serving the Lesser Slave Lake area. These three offices are High Prairie, Athabasca and Barrhead. The Barrhead office serves I. D. 123, the Athabasca office serves I. D. 128 and the High Prairie office serves I. D. 124, 125, 129 and M.D. 130. Although M. D. 130 is not in the defined area it is included in the welfare statistics (unless otherwise stated) because the statistics from the High Prairie office include this area. Although the population figures of the Lesser Slave Lake area include M. D. 130 but exclude Indian reserves; the C.D. 15 and Alberta figures exclude Indian reserves only.

^{1/} Annual Report, Alberta Hospitalization Benefits Plan, 1966, p. 16.

Welfare is discussed under the following headings: pensions, long-term social allowance, short-term social allowance, municipal assistance, and assistance issued by the Indian Affairs Branch. Pensions include old age assistance, blind persons' allowances, disabled persons' allowances, mothers' allowances, disabled persons' pension and supplementary allowances. Short-term social allowance includes all social assistance and social allowance issued by voucher. Long-term social allowance includes social allowance issued by payroll, hospital and medical allowances and guardians' social allowance. Municipal assistance includes all assistance issued by municipalities to their residents. Municipal assistance is a type of short-term social allowance but it is issued by the municipalities and 80% of the cost is then refunded to the municipality by the province. Public assistance issued by Indian Affairs includes all welfare assistance paid to residents of reserves by the Indian Affairs Branch.

People receiving pensions and long-term social allowance are generally unemployable. They are elderly, have some physical disability, ill health, or some other reason that disqualifies them as employees. Many of the people receiving assistance under the categories of short-term social allowance, municipal assistance and public assistance from Indian Affairs are unemployed temporarily or are underemployed. These latter categories of welfare can be reduced more easily and directly than the pensions and long-term social allowance categories.

Pensions

Table 14 shows a breakdown of the number of people on pensions in the Lesser Slave Lake area, C. D. 15 and Alberta and an estimate of the money expended under this category.

Table 14

PENSIONS

NUMBER OF CASES AND ESTIMATED EXPENDITURES

JULY 1967 ^{1/}

Area	Number of Cases	Av. Monthly Cost	Estimated Total Monthly Expenditures ***
Lesser Slave Lake Area *	126	-	\$ 8,754.48
C. D. 15 **	455	-	\$ 31,613.40
Alberta ***	6,558	\$69.48	\$455,649.84

* Includes M. D. 130 and excludes Indian reserves.

** Excludes Indian reserves.

*** Monthly costs are estimated by taking the Alberta average cost per case and multiplying by the number of cases.

The expenditures on welfare in the various areas are estimated by taking the Alberta average cost per case and multiplying by the number of cases. The number of cases given is for July 1967, but this number is not likely to fluctuate rapidly because of the nature of the reason for eligibility for pensions.

Table 15 shows some rate comparisons of the incidence of people receiving pensions.

Table 15

NUMBER AND RATE OF PEOPLE RECEIVING PENSIONS

LESSER SLAVE LAKE AREA, C. D. 15 AND ALBERTA

JULY 1967 ^{2/}

Area	Population*	Percent of Alberta Population	Number of Cases	Percent of Alberta Cases	Population Per Case
Lesser Slave Lake Area **	17,620	1.2	126	1.9	140
C. D. 15	84,466	5.9	455	6.9	186
Alberta	1,443,014	100.0	6,558	100.0	220

* Excludes Indian Reserves

** Includes M. D. 130

^{1/} Special tabulations from Alberta Department of Public Welfare records.

^{2/} Number of cases from special tabulations by Department of Public Welfare. Population computed from Canada Census, 1966. Rates computed by Rural Development Research Branch.

The Lesser Slave Lake area has 1.2% of the total Alberta population but it has 1.9% of the total people receiving pensions. One person out of every 220 in Alberta is receiving a pension while one person out of every 140 in the Lesser Slave Lake area is receiving a pension. The proportion of people receiving pensions is much higher in the Lesser Slave Lake area than in the rest of Alberta.

Long-Term Social Allowance

Table 16 shows the number of people receiving long-term social allowance and an estimate of the total expenditure in July, 1967.

Table 16 LONG-TERM SOCIAL ALLOWANCE
NUMBER OF CASES AND ESTIMATED EXPENDITURE
LESSER SLAVE LAKE AREA, C. D. 15 AND ALBERTA
JULY 1967 ^{1/}

Area	Number of Cases	Estimated Total Expenditure***
Lesser Slave Lake*	338	\$ 43,166
C. D. 15**	1,117	\$ 142,652
Alberta**	15,237	\$1,945,917

* Includes M. D. 130 and excludes Indian reserves.

** Excludes Indian reserves.

*** Expenditures computed by using the Alberta average of \$127.71 per case and multiplying by the appropriate number of cases.

The expenditures were estimated by taking the Alberta average cost per case and then multiplying by the appropriate number of cases. It is estimated that about \$43,000 per month is received by people in the Lesser Slave Lake area in long-term social allowance payments.

^{1/} Alberta Department of Public Welfare records, special tabulations.

Table 17 gives some comparative rates of the incidence of people on long-term social allowance. The Lesser Slave Lake area has 1.2% of the Alberta population but it has 2.2% of the Alberta total of people receiving long-term social allowance. This is almost double the average Alberta rate. Another method of measuring the incidence of people on long-term social allowance is to compare the number of people in the population to the number of people receiving this type of welfare payment. In the Lesser Slave Lake area there are 52.1 persons in the population for every person receiving long-term social allowance while in Alberta there are 94.7 persons in the total population for every person on this type of welfare. This illustrates again that the Lesser Slave Lake area rate is almost double the provincial average.

Table 17 LONG-TERM SOCIAL ALLOWANCE
NUMBER OF CASES AND RATES OF OCCURRENCE
LESSER SLAVE LAKE AREA, C. D. 15 AND ALBERTA.
JULY 1967 ^{1/}

Area	Population**	Percent of Total Alberta Population	Number of Cases	Percent of Total Alberta Cases	Population per Case
Lesser Slave Lake Area *	17,620	1.2	338	2.2	52.1
C. D. 15	84,466	5.9	1,117	7.3	75.6
Alberta	1,443,014	100.0	15,237	100.0	94.7

* Includes M. D. 130.

** Excludes Indian reserves.

^{1/} Population figures from Canada Census 1966. Number of cases from Alberta Department of Public Health. Rates computed by Rural Development Research Branch.

Short-Term Allowance

Table 18 shows expenditures and comparative rates of expenditures on short-term social allowance in the Lesser Slave Lake area, C. D. 15 and Alberta. The Lesser Slave Lake area contains 1.2% of the Alberta population but 5.2% of the monthly expenditures on short-term social allowance go to people in this area. The rate of expenditure is more than four times the provincial average. In Alberta 25¢ per capita is spent on short-term allowance per month while in the Lesser Slave Lake area \$1.08 per capita per month is the rate of expenditure.

Table 18
SHORT-TERM SOCIAL ALLOWANCE
1966 AVERAGE MONTHLY EXPENDITURES
LESSER SLAVE LAKE AREA, C. D. 15 AND ALBERTA ^{1/}

Area	Population*	Percent of Alberta Population	Average Monthly Expenditures	Percent of Alberta Expenditures	Expenditures Per Capita Per Month
Lesser Slave Lake Area **	17,620	1.2	\$ 19,046	5.2	\$1.08
C. D. 15	84,466	5.9	\$ 51,793	14.1	\$0.61
Alberta	1,443,014	100.0	\$366,735	100.0	\$0.25

* Excludes Indian reserves.

** Includes M. D. 130.

Table 19 shows the number of cases and the average rate at which they occur in the Lesser Slave Lake area as compared with C. D. 15 and Alberta. Although the Lesser Slave Lake area contains only 1.2% of the Alberta population it has a monthly average of 5.8% of the Alberta short-term social allowance cases. This is over four times the Alberta rate. In Alberta there are 434.3 persons for every case receiving short-term social allowance, but in the Lesser Slave Lake

^{1/} Population figures from Census of Canada 1966. Average monthly expenditures were calculated by Rural Development Research Branch from statistics supplied by Alberta Department of Public Welfare.

area there are only 91.8 persons for every short-term social allowance case.

Table 19
SHORT-TERM SOCIAL ALLOWANCE
1966 AVERAGE MONTHLY NUMBER OF CASES
LESSER SLAVE LAKE AREA, C. D. 15 AND ALBERTA ^{1/}

Area	Population*	Percent of Alberta Population	Monthly Av. Number of Cases	Percent of Alberta Cases	Population Per Case
Lesser Slave Lake Area **	17,620	1.2	192	5.8	91.8
C. D. 15	84,466	5.9	627	18.9	134.7
Alberta	1,443,014	100.0	3,323	100.0	434.3

* Excludes Indian reserves

** Includes M. D. 130.

Municipal Assistance

Municipal assistance is temporary assistance issued by municipalities or by provincial welfare offices on behalf of municipalities to their permanent residents. The provincial government refunds 80% of the cost of this assistance to the issuing municipality. Table 20 shows the total expenditure under the category of municipal assistance for the Lesser Slave Lake area and for C. D. 15 for 1964 and 1966.

^{1/} Population figures from Canada Census 1966. Average number of cases computed by Rural Development Research Branch from data supplied by Alberta Department of Public Welfare. Rates computed by Rural Development Research Branch.

Table 20
EXPENDITURES ON MUNICIPAL ASSISTANCE
LESSER SLAVE LAKE AREA AND C. D. 15
1964 AND 1966 ^{1/}

Area	Expenditures In 1964	Expenditures In 1966	Percentage Increase	Population In 1966	Expenditure Per Capita Per Year
Lesser Slave Lake Area **	\$146,673	\$149,999	2.3	17,620	\$8.32
C. D. 15	\$412,001	\$475,404	15.4	84,466	\$4.88

* Includes I. D. 130 and all Incorporated centres in the improvement district.

** Excludes Indian reserves.

Expenditures on municipal assistance increased by 2.3% in the Lesser Slave Lake area and 15.4% in the whole of C. D. 15 from 1964 to 1966. Although expenditures in the Lesser Slave Lake area increased more slowly than in C. D. 15, expenditures per capita were higher in the Lesser Slave Lake area than in the whole census division. Expenditures per capita were \$8.32 for the Lesser Slave Lake area and \$4.88 for the census division.

Table 21 shows the number of heads of families assisted in January 1967. The head of a family as used in this table could be a single person or a married person with dependents.

Table 21
HEADS OF FAMILIES ASSISTED IN JANUARY 1967
LESSER SLAVE LAKE AREA AND C. D. 15 ^{1/}

Area	Population*	Percent of C.D. 15 Population	Number of Cases	Percent of C.D. 15 Cases	Population Per Case
Lesser Slave Lake Area **	17,620	20.9	134	37.6	131.5
C. D. 15	84,466	100.0	356	100.0	237.3

* Excludes Indian reserves.

** Includes I. D. 130.

^{1/} Expenditures from Alberta Department of Public Welfare, Population from Canada Census 1966. Calculations made by Rural Development Research Branch.

The Lesser Slave Lake area has 20.9% of the C. D. 15 population but it has 37.6% of the municipal assistance cases of the census division. The census division has 237.3 persons for every municipal assistance case while the Lesser Slave Lake area has 131.5 persons per case. The rate of occurrence of cases under municipal assistance in the Lesser Slave Lake area is about 1.8 times the C. D. 15 average.

Public Assistance on Indian Reserves

Public assistance on Indian reserves is issued by the Indian Affairs Branch. The statistics given in this report came under the categories of people on permanent welfare and people receiving emergency welfare. The statistics give the number of people on welfare and not heads of families as reported for provincial statistics. An estimate of the number of heads of families can be derived from the figures given in the table by dividing the number of people reported by 5.1 which is the average number of people per household receiving public assistance from the Indian Affairs Branch in Alberta in February, 1966.

Table 22

WELFARE ON INDIAN RESERVES LESSER SLAVE LAKE AREA 1/ 1966 - 1967

	Number or Amount	Population	Rate
Number of People on Permanent Welfare	364**	1727	4.7 Persons per case
Average Monthly Number of People on Emergency Welfare	676**	1727	2.6 Persons per case
Total Welfare Costs ***	\$169,596	1727	98.20 Per Capita per Year

* Population resident on Indian reserves.

** Number of persons not number of heads of families as reported in provincial statistics.

*** Total yearly costs.

1/ Statistics compiled by Rural Development Research Branch from data supplied for Indian reserves by the Indian Affairs Branch, Department of Indian Affairs and Northern Development.

The preceeding table shows that on Indian reserves in the Lesser Slave Lake area there were an average of 4.7 persons in the total population for every person receiving permanent welfare and 2.6 people in the population for every person receiving emergency welfare. In order to make these figures more easily comparable to the provincial figures, the total number of people receiving welfare can be divided by 5.1 ^{1/} to give an approximate number of heads of families. If this is done there are approximately 71.4 families on permanent welfare and this is a rate of 24.2 persons in the population of Indian reserves for every family on permanent welfare. There are approximately 132.5 families on emergency welfare each month which is a rate of 13.0 persons in the population for every family head on welfare. These are much higher rates than the comparable provincial welfare rates. The per capita welfare expenditures of \$98.20 are also much higher than the provincial rate.

Summary

Welfare can be discussed under the headings of pensions, long-term social allowance, short-term social allowance, municipal assistance and public assistance on Indian reserves. In each of these categories (except Indian reserves) the number of people on welfare in the Lesser Slave Lake area, compared with the population of this area is much higher than the C. D. 15 or Alberta average. This is shown in Table 23. The lower the population per case as shown in the table, the higher the incidence of welfare recipients.

^{1/} Five point one is the average size of family on Indian reserves in the area.

Table 23

ESTIMATED MONTHLY RATE OF HEADS OF FAMILIES ON WELFARE
ASSISTANCE - LESSER SLAVE LAKE AREA, C. D. 15 AND ALBERTA

	Pensions	Population * Per Case			Indian Reserve Permanent Welfare	Indian Reserve Emergency Welfare
		Long-term Social Allowance	Short-term Social Allowance	Municipal Assistance		
Lesser Slave Lake Area **	140	52.1	434.3	131.5	24.2	13.0
C. D. 15	186	75.6	134.7	237.3	N.A.	N.A.
Alberta	220	94.7	434.3	N.A.	N.A.	N.A.

* Population used for calculation of the ratio shown excluded Indian reserves except in the Indian reserve calculations.

** Lesser Slave Lake area for purposes of these statistics includes I. D.'s 123, 124, 125, 128, 129, and M. D. 130 and all incorporated towns and villages within that area.

An estimate of the total expenditures on various types of welfare is shown in Table 24.

These estimates are drawn from two different years and are sometimes made on the basis of average provincial expenditures and should therefore be regarded as estimates and not as actual expenditures. The amounts do show, however, the magnitude of the expenditures. If welfare were to be classified as an industry it would be a major wealth producing industry for the Lesser Slave Lake area.

Table 24

ESTIMATED YEARLY WELFARE EXPENDITURES
LESSER SLAVE LAKE AREA

Social Allowance, Short-term - 12 Months @ \$19,046	=	\$ 228,552
Social Allowance, Long-term - 12 Months @ \$43,166	=	\$ 517,992
Pensions - 12 Months @ \$ 8,754	=	\$ 105,048
Municipal Assistance, Total		\$ 149,999
Welfare on Indian Reserves		\$ 169,596
TOTAL:		<u>\$1,171,187</u>

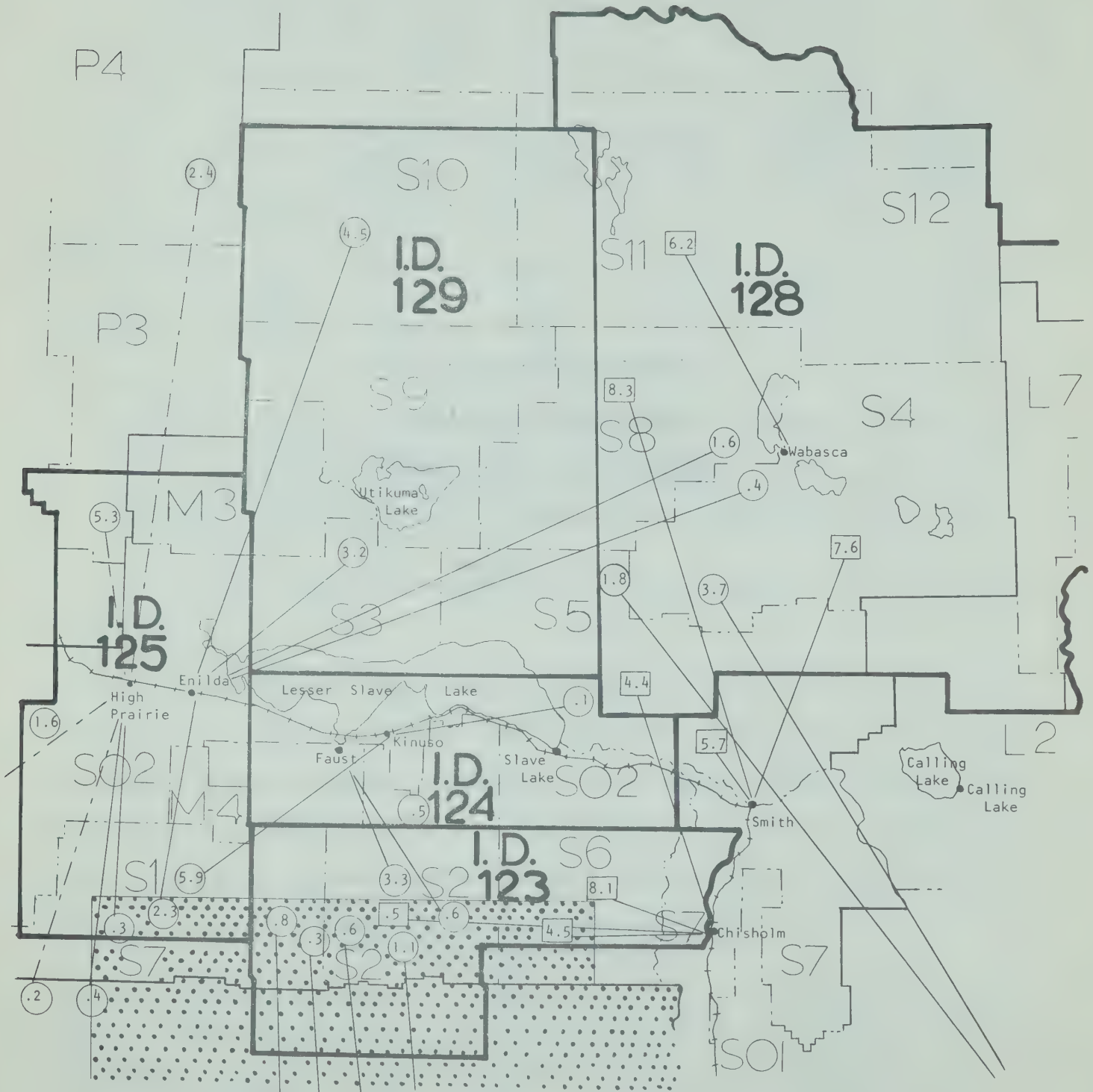
PRIMARY INDUSTRIES IN THE
LESSER SLAVE LAKE AREA:
FORESTRY, GAS, OIL, FISHING

by

Jerry F. Bigam

Figure 1

MOVEMENT OF LOGS OR ROUGH LUMBER TO PLANER MILLS



- Logs sawn in bush, in millions of f.b.m.
- Whole log operations, in millions of f.b.m.
- ▤ MacMillan-Bloedel Reserve area.

FORESTRY

Lumbering activity in the Lesser Slave Lake area ^{1/} began in the late 1800's, mainly to supply local construction needs. From 1912 to 1915, construction of the N.A.R. along the south edge of the lake created a demand for ties which were produced from lumber in the area. This rail link ensured the establishment of a continuing lumbering industry in the area by the creation of a transportation link to major centres.

Since 1956, timber production in the total area has varied from 70 to 100 MM fbm per year. From 1954 to 1959, the average annual cut amounted to 78.0 MM fbm. From 1960 to 1966, the average annual cut was almost the same at 78.8 MM fbm.

However, these average annual production figures do not show the changes within the region and the corresponding effects on the towns and villages. The following outlines these changes and provides an indication of the direction of future growth in the area.

Timber production by management unit is presented below. The figures include both coniferous and deciduous species and refer to the total which was 'logged' in the area. The map on page 49 outlines the management unit boundaries.

^{1/} Defined as the Slave Lake Forest.

Table 1

TIMBER PRODUCTION BY MANAGEMENT UNIT

	In MM fbm				
	<u>1956^{1/}</u>	<u>1960-61^{2/}</u>	<u>1962-63</u>	<u>1964-65</u>	<u>1966-67</u>
S 1	5.1	11.3	27.3	31.5	17.4
S 2	19.5	8.0	4.2	8.8	7.8
S 3	3.0	3.2	5.0	6.3	7.8
S 4	-	-	4.1	6.3	6.3
S 5	11.1	13.9	13.7	15.9	11.4
S 6	30.3	26.8	12.9	10.1	13.0
S 8	-	0.7	1.4	3.5	9.5
S10	-	-	1.8	-	3.5
Sub Total	69.0	63.9	70.4	82.4	76.7
S02	-	3.5	8.3	2.1	4.5
Total	69.0	67.4	78.7	84.5	81.2

Note: In the fiscal year, 1967-68, lumber production dropped to 68.1 MM fbm in the Slave Lake Forest.

^{1/} Calendar year

^{2/} Fiscal years

The significance of the above figures as they relate to the region's growth can best be shown by summarizing some of the past developments affecting the forest industry.

1. Product Mix or Make-up of Timber Production

When considering the effects of an industry on a region it is advantageous to think in terms of the total employment generated rather than the value of production. A thousand board feet of lumber logged, sawed and planed in the region creates more jobs than if any of these processes are carried on in other regions. For this reason, the volume of lumber involved in each of these operations will be separated.

Table 2
VOLUME OF LUMBER IN THE
LESSER SLAVE LAKE AREA
(MM fbm.)

	<u>1956</u>	<u>1960-61</u>	<u>1962-63</u>	<u>1964-65</u>	<u>1966-67</u>
Logging ^{1/}	69.0	67.4	78.7	84.5	81.2
Sawing ^{2/}	65.8	56.1	63.0	70.5	61.6
Planing ^{3/}	N/A	-	38.4 ^{4/}	-	39.5

As table 2 indicates, total logging activity increased to about 81 MM fbm or by 15% from 1956 to 1966. At the same time sawmill production varied within 10% of 63 MM fbm. No figures on planing production for 1956 are available; however, the average from 1960 to 1965 amounted to 38.4 MM fbm and in 1966-67, output totalled 39.5 MM fbm.

One point to note is the difference between sawmill and planing mill production. Figures for the former (as well as for logging) refer to all lumber rough sawn in the designated area: figures for the latter refer to only those mills from Slave Lake to High Prairie. The reason for this is that since much of the sawmilling is done by contract, people from communities along the lake might be employed. On the other hand, the planer mills are set up on a more or less permanent basis and the employees are likely to live near the site. At any rate, the influence will be centred in the community where the mill is located. Two large planers are located south east of Slave Lake and the economic impact from them will not likely be felt in the lakeshore communities.

The difference between the logging and sawing figures arises because of the logging berths which supply logs to plywood plants in Edmonton.^{5/} Another

^{1/} All of area

^{2/} All of area

^{3/} Area from Slave Lake to High Prairie

^{4/} Average from 1960-65

^{5/} In 1967-68, timber production dropped to 68.1 MM fbm, almost all of the decrease due to closure of an Edmonton plywood mill.

reason is that small amounts of timber have been (and are) cut for posts, poles and pulpwood. Timber cut for the plywood mills rose from 4% of the total timber production in 1956 to 22% in 1966.

An indicator of the effects on the communities from changes in the 'product-mix' is given by the following employment estimates. It takes an estimated 3.8 man hours to cut and haul a thousand fbm of timber to a sawmill. Another 2.5 man hours are required to saw and stack the rough sawn lumber. An additional 2.7 man hours are required to plane the thousand fbm. In total, then, from the timber state to the finished state, requires a labor input of 9.0 man hours.

Assuming that efficiency of operations was constant from 1960 to 1966, the increase in logging production from 67.4 MM fbm to 81.2 MM fbm would have meant an additional 5,244 man hours or 655 man days. Employment in the other two sections of sawing and planing would have remained almost constant since production changed very little.

2. Transportation Effects on the Timber Flow Within the Area ^{1/}

Referring back to Table 2 , it shows that sawn lumber production varied from a low of 56.1 MM fbm to 70.5 MM fbm from 1956 to 1966 with an average production figure of 63.0 MM fbm. These figures do not indicate a decline in lumber production as might be expected from the lack of growth in the region's economy. In fact, if one looks at the timber production, which rose 15%, this would favour the idea of an expanding economy.

The crux of the matter is, that while timber production (in total) increased, there has been a substantial shift in the flow of raw materials (i.e. timber and rough lumber). Previously, the lakeshore communities were centres of logging activity. One of the main reasons was the transportation situation. These centres sprang up along the railway and are also connected

^{1/} See Figure 1, p. 49.

by highway to Edmonton. They became important because they were loading points for the lumber. The Swan Hills formed a barrier to development from the south. Haul roads were cut from the lakeshore communities southward to the logging sites. Logs were cut on site (usually) and hauled to one of these towns for planing and/or shipment.

Then from 1956 to 1961, oil exploration activity intensified in the Swan Hills and oil was discovered. During this time, roads and seismic lines were cut through the forest and soon formed a grid pattern throughout the area. This had two or three major effects. Access to the forest was improved from the south side and no longer did the logs necessarily have to move northward to the lakeshore communities. Substantial amounts of good timber were slashed out for the roads and trails, thus reducing the potential cut by an estimated 10 to 12%. Another indirect problem which occurred was that with the population increasing in the area, forest fires became a more serious problem. The following table indicates the magnitude of this problem. No doubt, not all of the losses can be attributed to the presence of the additional people. However, from 1956 to 1961, an average of 80% of the forest fires were caused by man. Causes of fires ranged from smoking and campfires to industrial and lumbering activity. The large total burn during the period combined with the large fire in 1953, resulted in a reduction of the potential cut.

Table 3 FOREST FIRES - SLAVE LAKE DISTRICT ^{1/}

<u>Fiscal Year</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>
No. of forested acres burned in 000's of acres	75.0	1.0	1.0	56.0	3.4	21.0	5.6	1.1	18.6	0.3	0.8	0.9	0.1	1.5

^{1/} In 1967-68, over 800,000 acres were burned.

3. Government Regulation

Prior to 1965, licences were sold to operators which permitted them to cut a certain quantity of timber from a given area. This system did not encourage a sustained yield and in 1965, the quota system was implemented.

The most significant point of the quota system was that each management unit had a quota cut established which would result in a sustained yield of timber.

By the time this was introduced a number of areas on the south shore of the lake had been over-cut. ^{1/} Consequently the operators in the areas received quota cuts which were considerably smaller than what they had been cutting in prior years. Compounding this situation was the presence of the MacMillan Bloedel Lease and Reserve areas. The timber rights in this area were set aside prior to 1965 as one of the conditions necessary for the construction of a pulp mill near Whitecourt. While a number of operators are presently logging raw timber from the lease and reserve areas, there is little chance for increased quotas being sold in the special area. A number of operators in this reserved area are headquartered along the lake and this limit to expansion has seriously affected their economic viability.

4. Efficiency

One other important influence has been the change in the general level of efficiency in the forest industry. Power saws have replaced hand saws, newer saw mills and larger trucks have been introduced and the net result has been a lower labor requirement per thousand board feet. As noted previously, total timber production increased slowly from 1956 to 1966. To maintain the same level of employment meant that output would have had to

^{1/} For example, in 1956 in management unit S6, production was 30.3 MM fbm; in 1960 - 26.8 MM fbm; in 1964 - 10.1 MM fbm; and 13.0 MM fbm for 1966.

rise by a larger percentage than the increases in efficiency. It is estimated that the efficiency in logging increased by 25%; that of saw milling by 50-100%, and that of planing by 40-50%. Therefore, in order to maintain the same total level of employment, output in each of the three operations would have had to increase by at least the same percentages. The table below summarizes the employment effects.

Table 4 EMPLOYMENT CHANGES DUE TO EFFICIENCY INCREASES

	<u>Output Increase</u>	<u>Estimated change in efficiency</u>	<u>Change in Employment</u>
Logging	18%	25%	decrease
Saw	Constant	50-100%	decrease
Planing	Constant	40-50%	decrease

The employment decreases would be most noticeable in the sawmilling sector, followed by the planing sector and then the logging sector.

CONSEQUENCES OF CHANGE

The result of the above variables are that logging and lumbering have had to move to points other than Faust and Kinuso or other points on the lake. A large sawmill-planermill complex is located at Smith. This is mainly supplied with timber from S4 and S5. Another large sawmill-planermill is located at Chisholm. Timber for this mill is cut from S5 and S6. Then, at the present time, most of the timber cut south of Canyon Creek is sent to Smith or Chisholm for sawing and planing. (See map, Figure 1).

At the other end of the lake, there are 2 planer mills at Enilda and 2 at High Prairie. Timber for these mills is supplied mainly by contract bush mills in S1 and north of the lake in S3, S4, S8 and S10. Another large quota will be developed by the Wabasca Indian Band. This leaves the area south of the lake to consider. A planer mill at Kinuso receives about 1/3 of its rough lumber from the area and the remaining 2/3 from around High Level. One other

operator has a quota south of Faust and operates a small sawmill and planer in the hamlet.

The total quota cut not committed to either the east or west ends of the lake, and within an economical hauling distance, amounts to 11.1 MM fbm. Presently this is divided among 4 different operators, 2 of which account for 9.8 MM fbm.

Expansion of present output will arise from new quotas which will be opened up 100 miles north of the lake. The total quota for this area will amount to about 25 MM fbm. Only about 15 MM fbm of this will affect the Lesser Slave Lake area as the remainder will likely be shipped westward to the Peace River area. Even the effect of the 15 MM fbm cut will remain in doubt until the quotas are actually sold. If lumber operators working out of the Peace River area purchase the quotas, then the economic impact on the Lesser Slave Lake region will be very small if not insignificant.

For the following projections, a total timber cut of 110 MM fbm by 1981 was estimated.^{1/} This includes all quotas which can reasonably be expected to have an appreciable impact on the Lesser Slave Lake area.

The employment picture to 1981 is summarized in the following table:

Table 5 EMPLOYMENT OPPORTUNITIES IN THE DESIGNATED AREA

	MM fbm	<u>Employment Estimates</u> <u>(Man-Years)</u>
Logging	110	173
Sawing	45	47
Planing	45	<u>50</u>
Total Employment (Man-Years)		<u>270</u>

The above figures are in man-year terms. If present practices of logging during the winter only are followed, then about 500 men would be required in the logging operations for about 100 days. Similarly, if the sawing and

^{1/} Refers to total logging activity.

planing seasons are not year round, then more men would be required for shorter periods.

The reason for the large difference between the volume logged and the volume sawn and planed is that much of the lumber from quotas within the area are (and will be) hauled to sawmill-planermill complexes outside of the area.

At the moment other timber resources are available for development, the most promising of which is poplar: A study, just completed for the Department of Industry and Tourism, has outlined the economic feasibility of constructing an integrated sawmill-particleboard manufacturing plant at either Slave Lake or Smith. Such a plant would use some 20 MM fbm of poplar annually and this would create some 90 new logging jobs in an area north-east of Lesser Slave Lake. In addition, another 100 full-time jobs would be created as a result of the manufacturing operations.

The supply of poplar in the area is huge and as yet mostly untapped. If markets for poplar-based products could be found, then production of these products could increase by over 10 times the proposed plant output and still maintain a sustained yield of timber. This would result in the construction of other plants at different locations along the railway. In any event, the main problem facing this resource is the problem of finding a market for the finished products.

Note: In 1968, a huge forest fire burned out much of S6, S7, and S2 and may have reduced the annual quota cut by 8 to 10 MM fbm.

OIL INDUSTRY

Exploration and development activity has been carried on fairly extensively in the area since 1956. In that year, 3 gas fields were uncovered, although only 1 was put into production. In 1957, a major oil and gas field was discovered in the Swan Hills and the economy in the area flourished with the influx of oil workers. Activity decreased and no new oil pools or gas fields were discovered until 1961. During 1962, 222 wells were completed in the area. A large gas field, Marten Hills, was delineated. In each of the succeeding years, at least one major oil pool or gas field was uncovered -- in 1962, Snipe Lake; 1963, Utikuma Lake; 1964, Mitsue; 1965, Loon Lake and Nipisi; 1966, a new pool in the Red Earth Field.

As of December 31, 1967, production and reserves of crude oil were as follows:

Table 6 RESERVES AND PRODUCTION OF CRUDE OIL
IN THE LESSER SLAVE LAKE AREA ^{1/}

Field	Discovery Year	Marketing Reserves December 31, 1967 000 bbls.	Production 1967 000 bbls.	Cumulative Production To December 31, 1967 000 bbls.
Swan Hills	1957	830,007	22,755	100,993
Red Earth	1956 & 1966	39,290	873	1,895
Snipe Lake	1962	66,413	2,669	10,587
Utikuma Lake	1963	15,107	489	1,393
Mitsue	1964	156,466	4,917	11,561
Nipisi	1965	174,528	4,391	7,468
Loon Lake	1965	103	103	174
Total		1,285,524	36,197	134,071

^{1/} Oil & Gas Conservation Board; Reserves of Crude Oil, Gas, Natural Gas Liquid, and Sulphur, Province of Alberta, Edmonton, December 31, 1967.

The above area contains about 19% of the provincial reserves of crude oil and produced 15% of the Alberta total in 1967.

As of December 31, 1967, the reserves and production statistics for natural gas were as follows:

Table 7 RESERVES AND PRODUCTION OF NATURAL GAS
 LESSER SLAVE LAKE AREA

Field	Discovery Year	Marketable Reserves As Of Dec. 31, 1967 MMcf.	Production 1967 MMcf.	Cumulative Production To Dec. 31, 1967 MMcf.	Comments
Swan Hills	1957	305,000	7,713	38,632	
Red Earth	1956	-	234	488	Primarily an Oil Field.
West Prairie	1956	20,000	-	-	Presently Beyond Economic Reach.
Faust South	1956	10,000	-	-	Presently Beyond Economic Reach.
Marten Hills	1961	689,000	23	201	Start Major Production soon.
Snipe Lake	1962	-	790	3,002	Primarily an Oil Field.
Utikuma	1963	-	159	400	Primarily an Oil Field.
Mitsue	1964	162,000	2,678	6,110	Presently Beyond Economic Reach.
Nipisi	1965	110,000	1,338	2,237	Presently Beyond Economic Reach.
Loon Lake	1965	-	21	34	Primarily An Oil Field.
Heart River	1965	3,000	167	1,007	Supplies Local Utility.
Total		1,299,000	13,123	52,111	

Reserves in this area comprised 3.5% of the provincial reserves of

natural gas. In 1967, production of natural gas from this area amounted to 0.9% of the provincial total. However, gas production from this area will increase sharply in the next few years when pipeline shipments to Chicago commence from the Marten Hills Field.

Total drilling activity fluctuated widely from 1961 to 1966. At the same time, the centre of activity shifted from south to north. The table below illustrates the drilling activity in the area and the changes by improvement districts.

Table 8 NUMBER OF WELLS COMPLETED

	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>
I. D. 123	231	176	225	352	318	38
I. D. 124	6	4	6	80	165	39
I. D. 125	10	24	106	95	48	7
I. D. 128	9	7	10	14	36	64
I. D. 129	<u>9</u>	<u>11</u>	<u>38</u>	<u>80</u>	<u>187</u>	<u>155</u>
Total	<u>265</u>	<u>222</u>	<u>385</u>	<u>621</u>	<u>754</u>	<u>303</u>

In 1962, most of the drilling activity was centred in I. D. 123, in particular, the Swan Hills Field. Most of the economic effects were felt either in I. D. 123 or further south. While the largest percentage of well completions occurred in I. D. 123 from 1961 to 1965, the other I. D.'s saw increasing activity. The peak year for drilling activity was 1965 which saw the completion of 754 wells. In 1966, completions fell to 303, with the greatest decrease in I. D. 123 where completions decreased from 318 in 1965 to 38 in 1966.

These figures trace out much of the impact of the oil industry on the area's economy. For example, in 1961 an estimated 700 men were employed on the oil rigs in the area. This was a decrease from peak activity from 1957

to 1959 when the Swan Hills Field was discovered. By 1965, total employment had risen to an estimated 2,400 employees on the rigs. In both 1961 and 1965 activity continued throughout most of the year with lull periods of about one month occurring both at spring break-up and the beginning of winter freeze-up.

However, by 1966, the complexion of oil exploration activity changed as operations moved further north. Of the 303 wells completed in that year, about 230 or 75% were finished in the 7 month period from October to April. The remaining 24% were completed during the summer months, mainly in June, July, and August. About 600 men were employed on the rigs during the winter season, while another 200 worked on the rigs during the summer season.

As well as those people employed on the rigs, a large number of people found work in complementary occupations: seismic crews ran lines throughout most of the area, bush clearing crews were required, personnel to service the rigs with drilling mud, fuel and food were necessary.

All of the above employment resulted in additional income in the area. A large percentage of those employed were imported with the result that much of their income would have been spent outside of the area. Residents of the area would spend most of their income in the local communities with the resulting stimulus to the economy. The service industry expanded to satisfy the increased demand for hotels, motels, restaurants, barbershops, etc. Another result was the construction of new homes, warehouses and commercial establishments.

In summary, the oil industry has contributed substantially to the level of income in the area during the past ten years. However, oil exploration and drilling activity are moving to other areas and income resulting from this industry in the area is declining. This is particularly true for the communities on the south shore of Lesser Slave Lake as activity is moving further northward. Employment in the industry has decreased from the peak levels in

1964 and 1965 and is concentrated in the northern parts of the area. One consequence of the lower level of employment and income is that some of the businesses in the area which were established primarily to satisfy the additional demands of the oil workers are under-utilized. Some continuing impact will remain from pipeline installations, development drilling and the gas plant to be built in the Marten Hills Field.

It is impossible to predict the future effect of the oil industry on the area. However, since most of the land south of Lesser Slave Lake has been intensively explored, it seems safe to conclude that future drilling activity will be located north of the lake. Should oil exploration and drilling increase in the latter area, the communities most likely to receive the economic impacts would be on the east or west ends of Lesser Slave Lake or in the Peace River country.

COMMERCIAL FISHING

Commercial fishing has a long history in this area beginning shortly after the railroad was built along the south shore of Lesser Slave Lake. This lake was the first to be exploited as a commercial fishery and has continued to the present to provide the largest volume caught. Over the years, other lakes in the area^{1/} have supported commercial fishing operations and these have taken on relatively more importance in the last few years.

Since 1958, commercial fishing operations have earned the fishermen from \$240,000 to \$400,000 per year in gross income (including imputed income which includes fish caught by mink ranchers and used for feed or fish caught for own consumption by fishermen). The table below shows the volume and value of the fish catch in the area.

Table 9 COMMERCIAL FISHING CATCH IN LESSER SLAVE LAKE AREA
1958 to 1967 ^{2/}

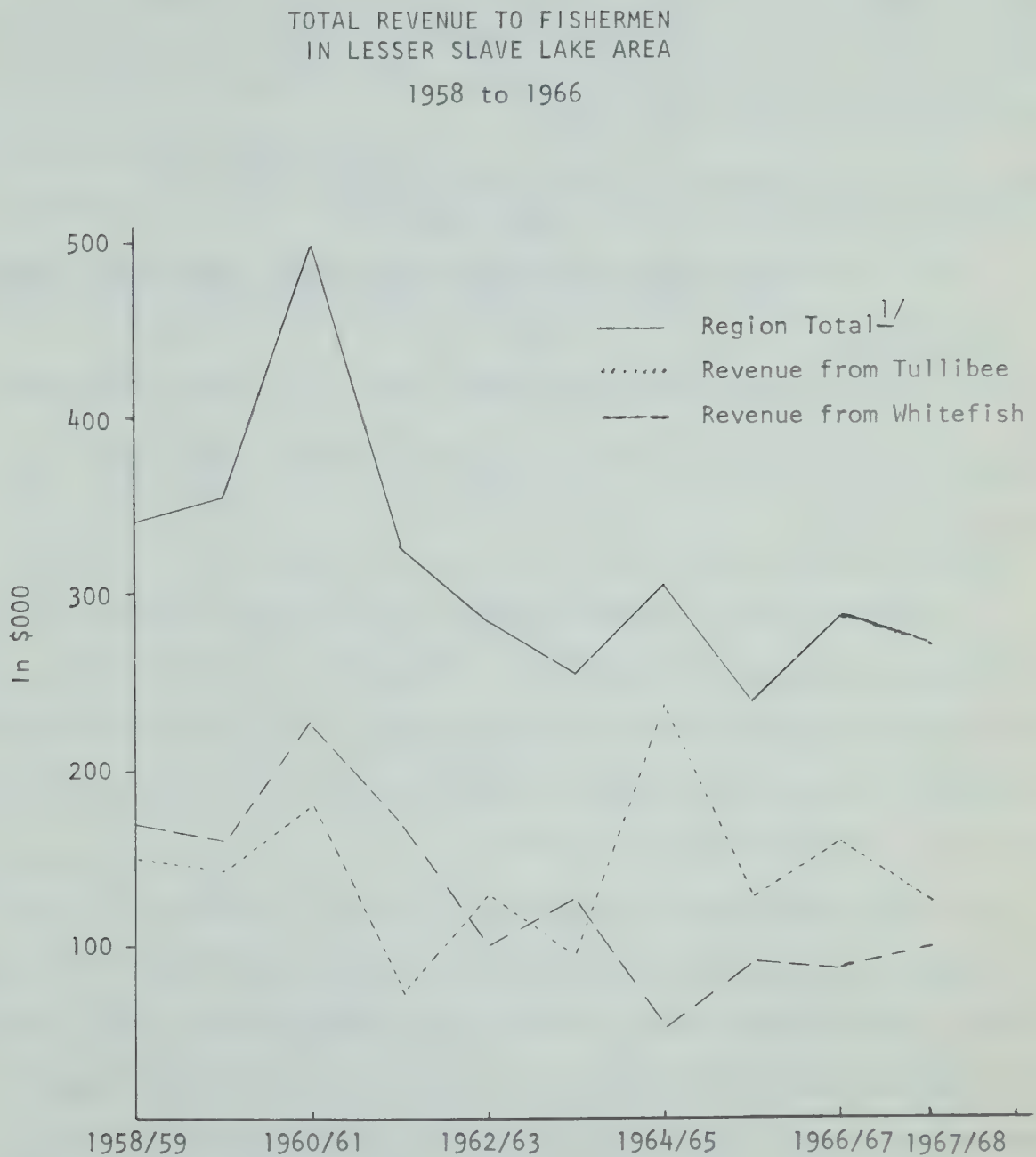
	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>
Total weight caught (000 lbs.)	5,231	5,799	7,731	4,360	4,610	3,396	5,708	3,691	4,563	4,211
Value to fishermen (\$000)	340	353	399	326	281	253	301	237	284	237

One of the significant points to note from the above is the variations both in volume caught and the value to fishermen. The second point to note is that since the peak catch in 1960/61, total revenue has fallen below that of earlier years.

^{1/} Defined as I.D. 124, 125, 128 and 129.

^{2/} Fiscal years.

Figure 2



^{1/} Includes Whitefish, Tullibee, Pike, Pickerel and other species.

The most important lake in the area is Lesser Slave Lake itself. During the period, it accounted for from 69% to 94% of the total weight caught. However, this lake is not quite as important in terms of total revenue since it provided from 53% to 92% of the total. The table below shows this relationship more clearly:

Table 10 COMMERCIAL FISHING SHARE OF LESSER SLAVE LAKE

1958 - 1966*

	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>
% by weight from Lesser Slave Lake	94	94	90	80	74	69	90	73	69	65
% by revenue from Lesser Slave Lake	87	93	86	76	78	62	81	56	53	56

* Fiscal years

The reason for the difference between the weight percentage and the revenue percentage can be attributed to the product mix of the lake. Tullibee and whitefish have been the major species caught: The former accounting for at least 4 times as much by weight while the price of the latter has been from 3 to 4 times as high as the former.

Over 90% of the tullibee is caught in Lesser Slave Lake. This species is present in other lakes in the area but the low value per pound does not provide a large enough margin to absorb high transportation costs. Most of the other tullibee has been taken from North and South Wabasca Lakes and Utikuma Lake because they provide relatively large hauls and are readily accessible.

As the table shows, the fishing revenue from Lesser Slave Lake has decreased to slightly over 50% of the region total from the previous high of over 90%. The reason is that the whitefish fishery has been closed since 1965 in an effort to restablish the population of this species which had become severely depleted. The total whitefish catch has fallen from over

1,000,000 pounds from 1958 to 1961 to 25,000 pounds in 1966 and 67,000 pounds in 1967. This decrease has to a minor extent been offset by larger catches in the other lakes in the area, as indicated by the graph on the following page. The loss of gross income from the decreased whitefish catch would be approximately \$90,000 below the 1961 level.

Fortunately, for the fishermen and mink ranchers, the catch of tullibee has not been seriously affected by the factors which have depleted the whitefish. Actually, since the 1964 season, the total tullibee catch has reached levels which were last seen during the 1960-61 season. This is of particular importance since mink ranching is one of the major industries in the area and for the past 2 1/2 years mink prices have been depressed. Had the tullibee catch dropped and the mink ranchers been forced to import higher priced feed, the area would have lost more mink ranchers than it already has. Fish feed accounts for about 50% of the production costs and a rise of 1¢ per pound increases costs by 10%. The graph, Figure 4, illustrates the tullibee catch from 1958 to 1967 for the region and each of the improvement districts.

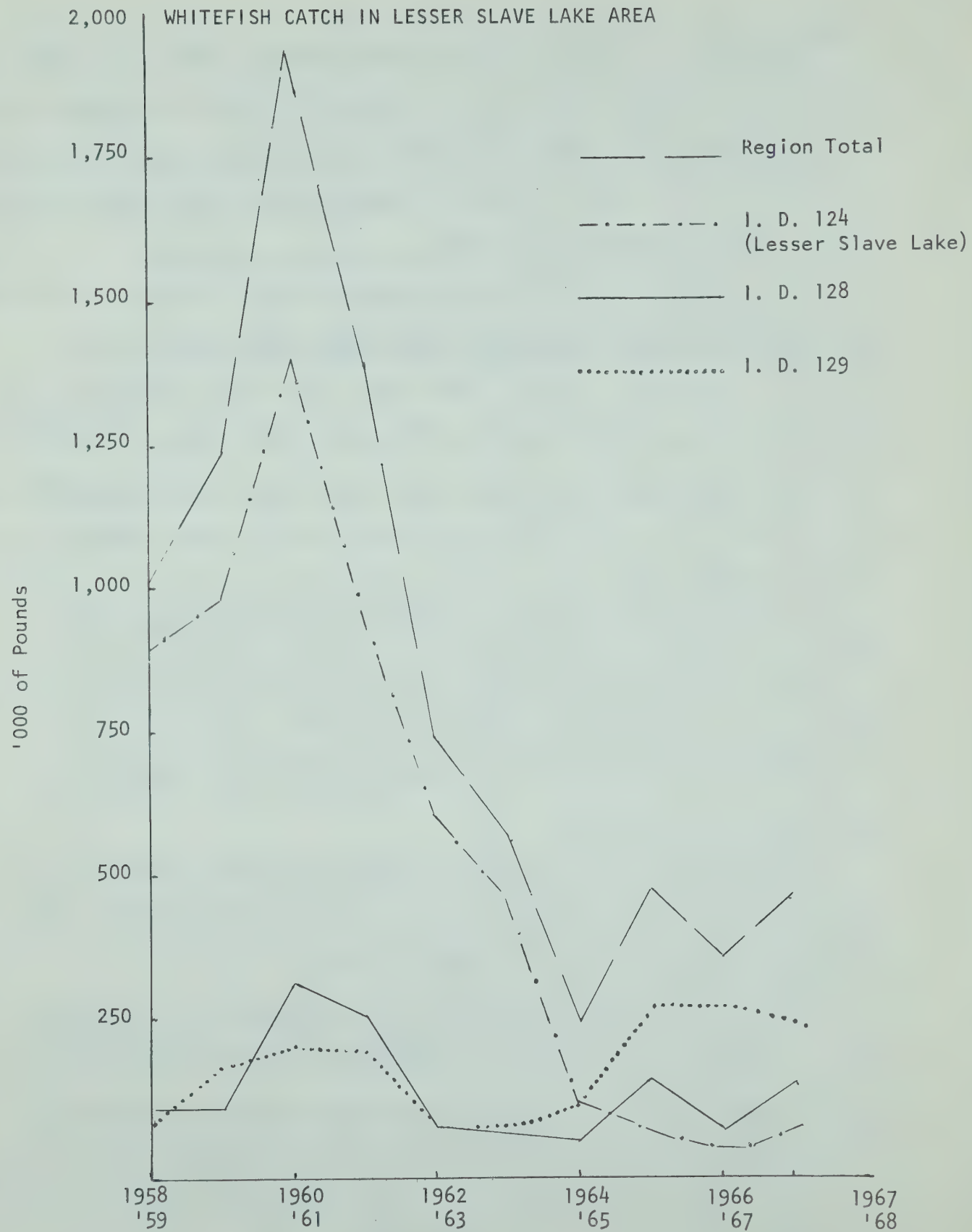
As well as the above, there are at least eight other lakes which are opened from time to time depending on the relationship between the supply from the lakes and the level of demand for fish.

In 1968, new fishing regulations were implemented in the province. The province is divided into seven fishing zones. One of these zones (Zone E) includes all of the lakes in the study area plus a few others. Only residents of the zone are permitted to fish the lakes within the zone.

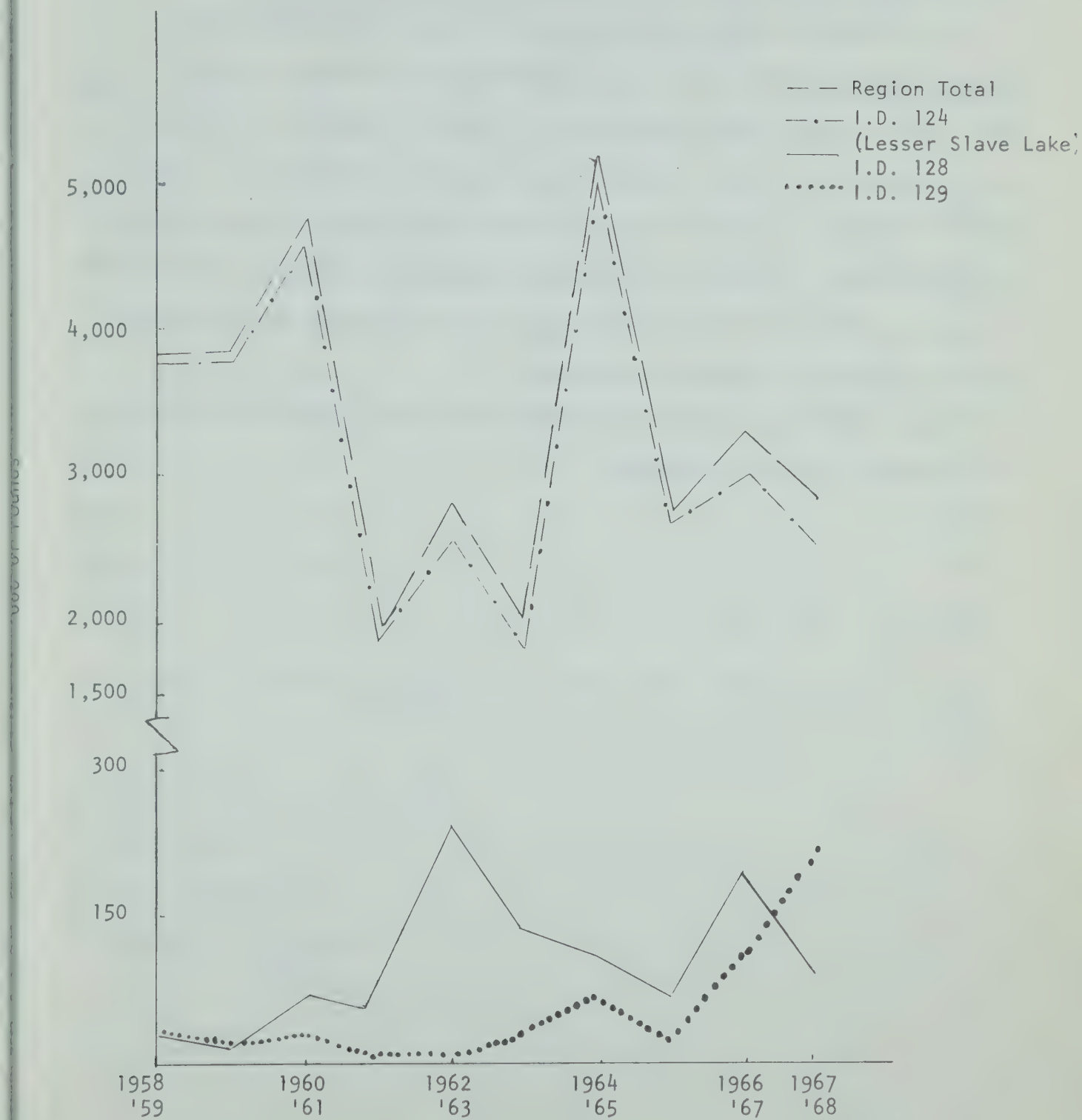
The commercial fisheries in this region are beset by two major problems:

1. Drastic yearly fluctuations in catch
2. Increasing infestation of whitefish

Figure 3



TULLIBEE CATCH IN LESSER SLAVE LAKE AREA



The first problem results in an indefinite yearly income while the second reduces the income from a given whitefish catch.

On the basis of long term averages, the Lesser Slave Lake region should provide a total catch in the neighborhood of 4,800,000 lbs. to 1981. This is broken down as follows: tullibee - 3,250,000 lbs.; Whitefish - 800,000 lbs.; pike - 550,000 lbs.; pickerel - 100,000 lbs.; and other species 100,000. At present day prices, this would amount to about \$340,000 to the fishermen. The key to a substantial commercial fishery in the area is to ensure that Lesser Slave Lake reaches previous catch levels, and that the mink ranchers can remain in business.

Those lakes which have provided most of the catch from 1958 to 1966 are listed on the following page:

Table 11

TOTAL CATCH BY MAJOR LAKE

1958 - 1966 ^{1/}

	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	
	(000s of pounds)									
Graham (Trout)	22	9	52	28	41	-	-	101	23	90% W ^{3/}
Maria (Britnell)	15	26	18	38	35	15	-	13	25	90% P
Nipisi ^{2/}	12	67	51	79	16	74	35	41	68	50% W 50% P
North Wabasca	77	61	234	229	136	67	122	-	60	50% T* 30% P
Orloff	21	20	25	28	2	14	6	2	21	33% W 33% T
Peerless	10	112	149	141	43	-	-	144	-	90% W
Round	15	7	-	-	12	8	3	-	7	90% W
Sandy	32	43	34	41	10	17	12	17	22	60% W
Snipe	30	2	1	4	41	52	12	46	31	90% P
Utikuma	-	-	13	68	506	570	280	484	844	20% W 70% P
Lesser Slave	4,913	5,431	6,974	3,497	3,394	2,354	5,158	2,703	3,127	70% T 15% W 12% P

* Prior to 1961, 50% Whitefish.

^{1/} Fiscal years

^{2/} (Little Whitefish)

^{3/} Legend: W - Whitefish
P - Pike
T - Tullibee

LABOR FORCE AND EARNINGS IN THE
LESSER SLAVE LAKE AREA

Figures from the 1961 census reveal some important differences between wage and salary earners ^{1/} in the Lesser Slave Lake area compared with the bench mark areas of C.D.15, Alberta and Canada.

The first point to note deals with the make-up of the potential labor force which is defined as these people over 15 years of age. In the Lesser Slave Lake area 45.6% of the population was over 15 years of age. In Alberta the figure was 64.7%; in C.D. 15, 60.1% and in Canada, 66.0%. This points out the relatively young population in the Lesser Slave Lake area. Almost 55% of the population was under 15 years, and this results in a heavy burden falling on the family heads and communities in supporting adequate services for the people in the area.

The total labor force in the area amounted to 2,807 people. Their source of income was as follows:

1. Wage and salary workers	1618
2. Self-employed	973
3. Unpaid family workers	156
Total workers	<u>2807</u>

The second point to note is the labor participation ratio. This refers to the percentage of the total population over 15 who are in the labor force. This information is tabulated below:

	<u>Lesser Slave Lake Area</u>	<u>C.D.15</u>	<u>Alberta</u>	<u>Canada</u>
Labor Participation Ratio	48.9	54.4	57.0	54.0

^{1/} Excludes self-employed.

In the Lesser Slave Lake area, proportionally fewer people had jobs than in the other areas listed. The table below illustrates the composition of this labor force by sex:

Table 12 LABOR FORCE BY SEX 1961

	<u>Male</u>	<u>Female</u>
	<u>%</u>	<u>%</u>
L.S.L.	80.5	19.5
C.D. 15	80.4	19.6
Alberta	73.9	26.1
Canada	72.6	27.4

The percentage of men in the labor force in both the Lesser Slave Lake area and C.D.15 is higher than for Alberta and Canada. This is probably a reflection of the additional employment opportunities available for women in urban centers. The former areas are largely rural and it is difficult for women to find jobs to supplement family incomes in these areas.

One of the most significant points is the difference in average earnings of the wage and salary earners between the Lesser Slave Lake area and the bench mark areas. The average earnings amounted to \$2,274 for the former area, \$3,013 for C. D. 15, \$3,221 for Alberta, and \$3,191 for Canada. So the average wage earner around Lesser Slave Lake earns about \$800 less than wage earners in C.D.15 and almost \$1000 less than the average wage earner in Alberta.

The following table shows the distribution of earnings in the comparative areas:

Table 13

DISTRIBUTION OF EARNINGS OF WAGE AND SALARY WORKERS (%)

	Less than \$3000	\$3000-5999	\$6000+
Lesser Slave Lake area	65.9	31.0	3.1
C.D.15	59.5	35.3	5.2
Alberta	46.7	43.4	9.9
Canada	47.9	43.0	9.1

The Lesser Slave Lake area had a much higher percentage of people who earned less than \$3000 in 1960 than any of the other areas noted. One reason for this is the seasonal nature of the work in the area. Logging, sawing, and planing which were the major wage paying occupations, are noted for the seasonal nature of the work and a person would have been fortunate to work in these occupations for more than seven months out of a year. Similarly fishing, trapping, mining and construction jobs were seasonal and few wage earners would have found full-time employment in one single industry. This shows up in the numerical values for the percentage of people working from 40 to 52 weeks out of a year. In the Lesser Slave Lake area 59.8% of the wage earners worked from 40 to 52 weeks. In C.D.15 the figure was 56.9%; for Alberta - 69.7%; and for Canada - 70.3%. An interesting point is that even though the percentage of people working this part of the year was less in C.D.15 than in the Lesser Slave Lake area, the average earnings in the former area were still greater by almost \$800. This implies that even where there are jobs available, the wage scale is lower in the Lesser Slave Lake region than in the surrounding area.

The major drawback of the above figures is that they refer to income statistics which are now 8 years old. ^{1/} However, some insight into current

^{1/} It should also be remembered that the figures include only wage and salary workers who comprised 60% of the labor force. The remainder of the labor force was composed of self-employed - 34% and unpaid family workers - 6%.

earnings can be arrived at by observing the industrial trends from 1960 to 1968.

Logging activity, which is one of the most important industries in the area, increased an overall 20% from 1960 to 1967. However, in 1968, logging production decreased to the 1960 level because of the closing down of a plywood plant in Edmonton which drew most of its logs from the area.

Sawing and planing operations in 1968 remained at a productivity level 10% above the 1960 level.

Employment opportunities (and therefore the level of earnings) in the above industries would have increased slightly up to 1967, but then fallen off in 1968, particularly for those people trying to find work in logging camps.

Revenue from fishing decreased from \$399,000 in fiscal year 1960 to \$284,000 in fiscal year 1966 and to \$237,000 in 1967. Even though the greater portion of the fishermen are self-employed and would therefore not appear in wage earner statistics, this revenue decrease would still tend to reduce the average earnings of wage and salary workers.

The oil industry is operating at about the same level as in 1961, although activity has moved north of Lesser Slave Lake. It should, therefore, be expected that the earnings from this industry would change little (except for the general increase in wage and price levels) in terms of the total area.

The value of agricultural products sold by farmers in the area increased by about \$510,000 (or 16%) from 1960 to 1965 after allowing for inflationary price increases. The majority of this increase was accounted for by the sales of mink ranchers. As farmers, these people are self-employed and do not show up in the previously presented wage and salary figures. The effects of this increase in farm sales would show up as increased purchases of goods and services which in turn would increase the wage and salary levels of those

working in the latter occupations.

From 1965 to 1968, mink ranching has faced an oversupply of furs and prices have tumbled from the 1965 high of \$18 per pelt to \$12 per pelt. Revenue dropped by around \$300,000 in this 3 year period and the effects of this decrease would be transmitted to wage and salary earners through reduced employment and/or earnings.

Agricultural sales from products other than mink ranching changed very little from 1960 to the present and therefore would have little effect on wage and salary levels.

During this time government payrolls in the area increased fairly rapidly. This would increase the demand for goods and services and tend to create more jobs and raise the average wage and salary figure or at least increase the labor participation rate (i.e. more female workers) especially retail sales and service occupations.

Revenue from fur trapping has steadily decreased and though trappers are excluded from the wage and salary figures because they are self-employed, the effects of this lower revenue would be felt through decreased sales in the retail and service occupations.

The sector which showed the largest increase in activity was construction. In 1960, expenditures amounting to \$580,000 were undertaken by the Department of Highways. In 1966 expenditures by this department had risen to \$4,340,000. This would have a substantial impact on the previous figures since most of the employees on the projects were wage and salary earners.

To summarize, the lumbering, mining, fishing, agriculture and trapping industries showed either constant or declining levels of output. On the other hand, construction and government payrolls increased. Considering the labor content of all the above industries it would seem appropriate to conclude that the average wage and salary earnings have not changed substantially from the

1960 figure but may have shown a slight increase. However, this increase may be due to the entry into the area of relatively highly paid individuals with little improvement among those reporting low incomes in 1960.

AGRICULTURE IN
THE LESSER SLAVE LAKE AREA

by

Paul J. Stelmaschuk

AGRICULTURE IN THE LESSER SLAVE LAKE AREA

Farming in the Lesser Slave Lake area began in approximately 1915, when the Northern Alberta Railroad was completed to McLennan. Since then agricultural development has centred largely in the western part of this area in the vicinity of High Prairie.

This report deals with the development and the adjustments necessary to make agriculture more economically viable.

The area of concern in this report involves Improvement Districts 124, 125, 128 and 129. Since much of the data required for the analysis of the agricultural sector is available from census sources on an improvement district basis, the area boundaries were made coterminous with improvement district boundaries.

Climate

Annual precipitation in the Lesser Slave Lake area averages 18 inches.^{1/} The western half of the area is in the 'G' moisture zone, which is characterized by 12 - 13 inches of precipitation from May to September and by 10 - 13 days under 2600 degree days^{2/} which determine plant growth. The eastern half of the Lesser Slave Lake area is in the 'H' and 'K' zones which receive 13 - 16 inches of precipitation from May to September. This section has 12 - 18 days under the 2600 degree days.

Most of the area under consideration is in the '6th temperature zone', which is characterized by 75 - 90 frost free days.^{3/} Approximately 10 miles north of Lesser Slave Lake the zone changes to '7' which has less than 75 frost free days. This imposes restrictions on grain production in Improvement Districts 128 and 129.

Moisture at seeding and harvest is another crop production hazard faced by farmers in the area.

^{1/} The Canada Land Inventory, Report No. 3, Department of Forestry and Rural Development, Ottawa, Figure 15.

^{2/} Ibid., p. 14. The 90-day frost free isotherm corresponds to the 2200 degree day isotherm. Degree days are above 42°F. When the temperature drops below 42°F., plant growth ceases. Degree days are tabulated during the growing season, when temperatures are over 42°F.

^{3/} Ibid. Figure 22.

Soils in the Lesser Slave Lake Area

Improvement District 125

Total Acreage	1,465,000
Pasture and woodland (non-arable)	325,000
Poor to fair arable land	135,000
Fair to good arable land	855,000
Good to very good arable land	60,000
Water	90,000

The good to very good arable land is located in the area surrounding High Prairie and north of Enilda.

Acreages were estimated from the soil survey of the High Prairie and McLennan Sheets, Research Council of Alberta, Report No. 63, 1952.

Improvement District 124

Total Acreage	948,000
Pasture and woodland	300,000
Doubtful arable land	230,000
Potentially arable land	200,000
Water	218,000

Acreages were estimated from the Exploratory Soil Survey, Report 64-1, Research Council of Alberta, 1963.

Improvement District 129^{1/}

Total Area	2,703,000
Pasture and woodland	1,663,000
Doubtful arable land	400,000
Potentially arable land	300,000
Water	340,000

^{1/} - Estimated acreages from the Exploratory Soil Survey, Report 64-1 and 58-1, Research Council of Alberta, 1963 and 1957 respectively.

Improvement District 128 ^{1/}

Total area	4,838,000
Pasture and woodland	4,000,000
Doubtful arable land	500,000
Potentially arable land	--
Water	338,000

Summary

Total acreage (I.D.'s 125, 124, 128, 129)	9,954,000
Pasture and woodland	6,288,000
Doubtful arable land	1,265,000
Arable or potentially arable land	1,415,000
Water	986,000

^{1/} Estimated acreages from the Exploratory Soil Survey, Report 64-1 and 58-1, Research Council of Alberta, 1963 and 1957 respectively.

Table 1
NUMBERS OF FARMS ^{1/}
LESSER SLAVE LAKE AREA

	<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u>	<u>Per cent change to 1966</u>
Improvement District 124					
Commercial ^{2/}	N.A.	N.A.	133	101	-24
Total	279	259	210	196	-30
Improvement District 125					
Commercial	N.A.	N.A.	298	193	-35
Total	514	590	480	489	- 6
Improvement District 128					
Commercial	N.A.	N.A.	--	--	--
Total	N.A.	2	--	2	--
Improvement District 129					
Commercial	N.A.	N.A.	3	3	--
Total	N.A.	N.A.	5	6	--
TOTAL: Area farms	793	851	695	691	
TOTAL: Commercial farms	N.A.	N.A.	434	297	

The number of farms in the area was almost the same for 1961 and 1966, while the number of commercial farms decreased 40 per cent. The drop in commercial farm numbers appears to be due largely to a redefinition of commercial farms by Dominion Bureau of Statistics. In 1961 commercial farms grossed \$1,200 in farm sales, while in 1966 commercial farms grossed \$2,500. In classifying farms, D.B.S. considers the value of agricultural product sales, the number of days the farm operator worked off the farm, and the proportion of farm to non-farm income received during one year.

^{1/} D.B.S.

^{2/} A commercial farm in 1966 was defined as a farm with gross farm sales of \$2,500 per annum.

Table 2

FARM SIZES ^{1/}

	<u>Improvement District 124</u>				<u>Improvement District 125</u>			
	<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u>	<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u>
Less than 3 acres	39	33	19	18	-	-	2	1
3 - 9	50	29	38	35	3	4	1	-
10 - 69	29	25	28	25	4	2	2	1
70 - 239	72	86	46	37	209	233	125	113
240 - 399	50	49	42	28	183	213	171	155
400 - 559	19	21	15	23	67	68	86	89
560 - 759	8	9	7	14	31	31	36	52
760 - 1,119	3	3	10	11	22	24	36	48
1,120 - 1,599	1	2	3	3	8	6	15	22
1,600 - 2,239	-	-	1	2	2	7	5	6
2,240 - 2,879	-	1	1	-	-	2	-	1
Over 2,880	1	1	-	-	-	-	1	1
Average farm size in acres ^{2/}	185	215	236	268	293	344	418	468

The size of farms in I.D. 128 and I.D. 129 has not been described, due to the very low numbers involved.

^{1/} D.B.S.

^{2/} Calculated by dividing the land in farms, Table 3 , by the number of farms, Table 1.

Table 3

LAND USE ^{1/}
(IN ACRES)

	<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>% Change (10 years)</u>	<u>1966</u>	<u>% Change (15 years)</u>	<u>Projected to 1981</u>
Improvement District 124							
In Farms	50,192	55,638	49,492		67,248 ^{2/}	40	84,000
Improved	14,510	19,244	20,743		25,327		36,000
In Crop	12,159	13,105	14,904	23	14,209		
Improvement District 125							
In Farms	152,100	203,022	200,862		214,602 ^{2/}	41	275,000
Improved	82,211	88,234	100,146		126,747		170,000
In Crop	54,503	67,006	76,380	40	94,209		
Improvement District 128							
In Farms	N.A.	1,216	N.A.		881 ^{4/}		2,000 ^{3/}
Improved	N.A.	397	N.A.		-- ^{4/}		-- ^{5/}
In Crop	N.A.	98	N.A.		--		--
Improvement District 129							
In Farms	N.A.	N.A.	1,791		2,953		6,000 ^{3/}
Improved	N.A.	N.A.	726		1,696		4,000
In Crop	N.A.	N.A.	669		851		
Total							
In Farms	202,292	259,876	252,145		285,684		367,000
Improved	96,721	107,875	121,615		153,770		210,000
In Crop	66,662	80,209	91,953		109,269		160,000

During the fifteen year period 1951 - 1966, land in farms increased 39 per cent while improved acreage increased 49 per cent.

^{1/} D.B.S.

^{2/}

Annual Report, 1966, Alberta Department of Municipal Affairs, Edmonton, p. 331.

^{3/} Estimate

^{4/}

Data for two farms is included in I.D. 129.

^{5/}

Included in I.D. 129.

Table 4 NUMBERS OF FARMS BY FARM SALES ^{1/}

	I.D. 124			I.D. 125			I.D. 128		I.D. 129	
	1956	1961	1966	1956	1961	1966	1956	1966	1961	1966
Small scale farms										
Less than \$250	N.A.	31	27	N.A.	56	93	-	-	-	-
\$250-2,499	N.A.	86	68	N.A.	244	203	-	2	4	3
Commercial farms ^{2/}										
\$2,500-4,999	N.A.	37	30	N.A.	106	90	-	-	-	3
<hr/>										
\$ 5,000 - 9,999	N.A.	36	29	N.A.	61	74	-	-	1	-
\$10,000 -14,999	N.A.	11	9	N.A.	10	19	-	-	-	-
\$15,000 -24,999	N.A.	4	22	N.A.	3	6	-	-	-	-
\$25,000 and over	N.A.	4	11	N.A.	-	4	-	-	-	-
	N.A.	1	-	N.A.	-	-	-	-	-	-
<hr/>										
Total commercial	N.A.	133	101	N.A.	298	193	-	-	1	3
Total farms	259	210	196	590	480	489	2	2	5	6
	<u>259</u>	<u>210</u>	<u>196</u>	<u>590</u>	<u>480</u>	<u>489</u>	<u>2</u>	<u>2</u>	<u>5</u>	<u>6</u>

Farmers retain 30 to 40 per cent of the gross farm sales as family income. On this basis the \$5,000 - 9,999 range in the table above become the marginal grouping in which farmers would likely earn \$3,000 per year for their families. after paying for all the farm operating expenses. In 1966, 36 per cent of the total farms and 70 per cent of the commercial farms in I.D. 124 had this earning power. In I.D. 125, 21 per cent of the total farms and 53 per cent of the commercial farms had this earning power in 1966. The better position of farmers in I.D. 124 is due to the inclusion of mink ranchers in the total farm numbers. Since the costs of production are different for mink ranchers than they are for other agricultural enterprises, there is a separate section in this report dealing with mink ranching.

^{1/} D.B.S.

^{2/} Commercial farms in 1966 were defined as those with farm sales over \$2500. In 1961, commercial farms were defined as those having farm sales over \$1200 per annum.

Table 5

LIVESTOCK PRODUCTION

	<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u>	<u>Projected to 1981</u>
Improvement District 124					
Milk cows	579	357	287	136	50
Other ^{1/} livestock	1,060	2,314	2,649	3,466	4,500
Pigs	1,181	1,639	2,568	453	500
Sheep	363	440	518	263	300
Poultry	11,887	14,548	12,973	7,662	5,000
Improvement District 125					
Milk cows	1,117	737	769	427	200
Other livestock	2,198	5,928	7,567	10,794	16,000
Pigs	6,611	6,644	7,553	3,769	5,000
Sheep	646	850	783	411	700
Poultry	27,300	32,175	29,643	23,908	20,000
Improvement District 128 ^{2/}					
Milk cows	N.A.	21	N.A.	1	5
Other livestock	N.A.	81	N.A.	378	300
Pigs	N.A.	33	N.A.	120	100
Sheep	N.A.	-	N.A.	-	-
Poultry	N.A.	210	N.A.	-	400
Improvement District 129 ^{3/}					
Milk cows	N.A.	N.A.	5	-	10
Other livestock	N.A.	N.A.	69	-	300
Pigs	N.A.	N.A.	74	-	150
Sheep	N.A.	N.A.	-	-	-
Poultry	N.A.	N.A.	51	-	200

Livestock projections for 1981 are based on trends in the area as well as provincial and national developments in various enterprises.

^{1/} Pig numbers in this table are for May, when census is taken. Annual production figures are calculated in another part of this report.

^{2/} Projected figures for Improvement Districts 128 and 129 are estimates of likely agricultural development.

^{3/} Ibid.

Table 6

SIZE OF LIVESTOCK ENTERPRISES

C.D. 15

	<u>1956</u>	<u>1961</u>	<u>1966</u>
Cows & heifers milked (or to be milked)	14,638	13,343	9,081
Farms reporting	4,684	3,998	2,781
Dairy cows per farm reporting	3.1	3.3	3.3
Beef cows - 2 yrs. & over	24,841	36,477	58,789
Farms reporting cattle ^{1/}	3,409	3,235	3,184
Cows per farm reporting	7.3	11.3	18.5
Sows - 6 months & over	28,070	12,935	8,035
Sow to pig ratio ^{2/}	N.A.	1 : 8.8	1 : 7.4
Farms reporting	4,566	3,104	2,610
Sows per farm reporting	6.2	4.2	3.1
Sheep on farms	11,010	20,071	11,367
Farms reporting	473	487	287
Sheep per farm reporting	23.3	41.2	39.6

^{1/} It is assumed that one half of the farms reporting dairy cows also had beef cattle.

^{2/} Calculated from D.B.S. data.

Livestock Feed Requirements Projected to 1981

Shown below are the livestock feed requirements based on projected livestock enterprise developments. Also shown are the acreages required to produce the livestock feeds. Figures are rounded to the nearest 10.

Dairy

265 milk cows @ 300 pounds of butter fat

1. Grain : 265 x 43 bu. barley = 11,400 bu. . 26/ac. = 440 ac.
2. Hay : 265 x 7 = 1,855 T. . 1.43/ac. = 1290 ac.
3. Pasture : 265 x 4 T = 1,060 T. . 1/ac. = 1060 ac.

Beef

10,300 beef cows (assuming sales of calves off pasture as long-yearlings, and approximately one half of the livestock herds as beef cows.)

1. Hay : 10,300 x 3 T. 30,900 T. . 1.43 T = 21,610 ac.

9,000 calves fed through the winter (assuming a 90 per cent weaning percentage).

1. Grain : 9,000 x 15 bu. barley 135,000 bu. . 26 = 5,190 ac.
2. Hay : 9,000 x 1 T. 9,000 T. . 1.43 = 6,290 ac.

Pigs

8,640 pigs. Assuming the sow-pig ratio at 1 : 8, with 720 sows there will be 8,640 pigs produced by farrowing 2 and one half times per year and eight pigs weaned per litter.

1. Grain for sows: 720 x 50 bu. (annually) 36,000 bu. . 26 = 1,380 ac.
2. Grain for pigs: 8,640 x 20 bu. 172,800 bu. . 26 = 6,650 ac.

Summary (1981)

Barley grain required (or barley equivalents)	355,200 bu.
Acres of barley required	13,660 ac.
Acres of hay required	29,190 ac.
Total crop acres required for feed	42,850 ac.
Projected crop acreage for 1981	160,000 ac.
Cash grains acreage for 1981	117,000 ac.

Table 7

CROP PRODUCTION ^{1/}
(IN ACRES)

	<u>1951</u>	<u>1956</u>	<u>1961</u>	<u>1966</u>
Improvement District 124				
Wheat	1,983	1,587	1,826	2,101
Oats	5,443	4,580	4,198	1,730
Barley	3,406	4,758	4,593	2,647
Rapeseed	-	N.A.	575	2,112
Other crops ^{2/}	260	419	115	930
Hay	990	1,477	3,444	4,741
Improvement District 125				
Wheat	9,917	4,465	5,003	12,495
Oats	13,516	9,170	10,722	6,334
Barley	25,861	44,229	43,266	38,789
Rapeseed	0	N.A.	1,716	9,553
Other crops	758	1,636	1,665	5,264
Hay	4,850	7,499	13,487	20,948
Improvement District 128				
Grains	-	56	N.A.*	N.A.
Hay	-	41	N.A.	N.A.
Improvement District 129				
Wheat	N.A.	N.A.	75	-
Oats	N.A.	N.A.	54	16
Barley	N.A.	N.A.	89	141
Other Crops	N.A.	N.A.	128	302
Hay	N.A.	N.A.	323	232

* N.A. - not available

Hay, barley and rapeseed production has increased in the area in the period 1951 to 1961, while oats production has shown a decline. Wheat production has increased in the most recent five year period.

^{1/} D.B.S.

^{2/} Other crops include rye, flax, mixed grain, corn and potatoes.

Table 8 GRAIN AND HAY YIELDS IN C.D. 15 AND ALBERTA*

	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>Ave.</u>
Wheat - C.D. 15	14.0	20.3	22.3	26.6	25.1	10.4	22.8	18.1	21.9	17.7	20
Alta.	20.4	20.9	19.8	15.8	19.3	25.1	22.3	26.1	29.2	22.7	22
Barley - C.D. 15	16.4	26.6	27.2	34.1	32.8	15.1	30.5	24.1	31.8	21.4	26
Alta.	27.8	30.5	28.7	27.0	31.3	34.9	32.2	33.9	41.1	31.3	32
Oats - C.D. 15	25.0	34.0	37.0	45.7	48.0	26.4	46.4	30.3	39.8	27.9	36
Alta.	34.5	37.9	40.3	36.9	46.5	51.2	40.5	47.3	48.5	40.8	42
Hay - C.D. 15	N.A.	N.A.	N.A.	N.A.	1.68	1.05	1.72	1.46	1.35	1.33	1.43
Alta.	N.A.	N.A.	N.A.	N.A.	1.52	1.48	1.37	1.94	1.61	1.39	1.55

* Calculated from data available at the Statistics Branch, Alberta Department of Agriculture, Edmonton.

Projection of livestock trends indicates that 43,000 acres of barley, or barley equivalent, will be required by 1981 to support the dairy, beef, and hog industries. Utilization of the improved crop acreage in the area is recapitulated below.

	<u>1956</u>	<u>1961</u>	<u>1966</u>	<u>Projected to 1981</u>
Improved crop acreage	108,000	122,000	154,000	210,000
- acres cropped	80,000	92,000	109,000	160,000
- per cent of improved acres	74%	75%	71%	76%

If 43,000 acres of the crop land are used for livestock feed production there would be 117,000 acres of cash grain produced in the area in 1981.

The amount of idle crop land, even with wet springs and necessary weed control measures, appears too high. Idle crop land has built-in costs which must be paid for by other farming operations. With modern-day weed control practices and fertilizer application which increase yields, the amount of idle land should be minimized.

Table 9 FARM SIZE BASED ON 3,000 HOURS OF LABOR

30 dairy cows	@	100	hours	per	cow
750 acres of wheat, oats or barley	@	4	"	"	acre
200 beef cows	@	15	"	"	cow
600 ewes	@	5	"	"	ewe
375 yearling steers	@	8	"	"	head
750 hogs	@	4	"	"	hog
3,000 hens	@	1	"	"	hen

The above labor requirements may be substantially reduced by changing the level of technology such as the use of more or bigger machines. There are, currently, farmers in the area operating units considerably larger than those suggested above, indicating the possibilities for further farm growth.

Projections of livestock numbers are shown in Table 5. By combining the projected livestock numbers with moderate levels of technology and annual labor inputs of 3,000 hours, it is possible to arrive at the number of farm units which the Lesser Slave Lake area could expect by 1981.

Using the labor assumption in Table 9, the following units are possible in the area with a moderate technological input. (Table 10)

Table 10 ESTIMATED NUMBER OF FARM UNITS - 1981
LESSER SLAVE LAKE AREA

	<u>Livestock Pro- jections - 1981</u>	<u>Farm Units Utilizing 3,000 hours of labor</u>
Milk cows	265 . 30	9
Other Livestock	10,300 ^{1/} . 200	51
Pigs	5,750 ^{2/} . 750	8
Sheep	1,000	1
Poultry	25,600	2
Crops	107,000 . 750	<u>142</u>
Total farms utilizing 3,000 hours of labor		<u>213</u>

A

1/ A 1:1 ratio is assumed for cows to young stock with the total livestock on farms at 20,300.

2/ D.B.S. data is given for the month of May. The annual production figure is projected to be 5,750.

Appraisal of Agricultural Development in the Lesser Slave Lake Area

Land improvement is basic to agricultural development. Assuming that trends established in the period 1951 - 1966 will continue in the 15 year period 1967 - 1981, in the Lesser Slave Lake area, by 1981, there will be:

36,000	improved acres in Improvement District 124
120,000	" " " " " 125
500	" " " " " 128
3,500	" " " " " 129

The following livestock production pattern emerges for 1981 on basis of projections of livestock production trends:

	<u>Milk Cows</u>	<u>Other Cattle</u>	<u>Pigs</u>	<u>Sheep</u>	<u>Poultry</u>
Improvement District 124	50	4,500	500	300	5,000
Improvement District 125	200	16,000	5,500	700	20,000
Improvement District 128	5	300	150	-	200
Improvement District 129	<u>10</u>	<u>300</u>	<u>100</u>	<u>-</u>	<u>400</u>
	265	21,100	5,750	1,000	25,600

Modern agricultural technology makes it possible for farm managers to operate farms much larger in size than the farms established by pioneers whose major farm production inputs were labor and land.

The expansion in size of farm units in the Lesser Slave Lake area has lagged considerably. For example such averages as 3.3 milk cows per farm, 18.5 beef cows, 3.1 sows, and 40 sheep reflect a serious adjustment problem faced by agriculture in the area. The low level of gross farm sales limits the amount of family income derived from farm operations.

It may be assumed that a farm operator can provide 3,000 hours of labor per year, and that a farm family can provide 4,000 hours of labor. ^{1/}

^{1/} 3,000 hours of labor is equivalent to 300 10-hour days.

In 1966 there were 297 commercial farms in the area. The drop to 213 farms (Table 4) represents a 28 per cent reduction. The total numbers of farms in the area in 1966, however, was 691. A reduction from 1966 total number to a projected number of 213 full-time farms represents a serious adjustment problem. It is likely that small scale and part-time farming will persist in the area. It is estimated that there will be approximately 187 such farms bringing the total number of farms in area by 1981 to 400 (213 + 187). Programs which will alleviate adjustment problems need to be implemented.

Education Level in the Rural Sector

EDUCATION LEVEL OF RURAL POPULATION (NOT ATTENDING SCHOOL) ^{1/}

Table II

1961

	<u>I.D. 124</u>	<u>I.D. 125</u>	<u>I.D. 128</u>	<u>I.D. 129</u>
No school	487	790	95	178
- under 5 years -----	320	489	N.A.	N.A.
- older residents -----	167	301	N.A.	N.A.
Pre-school	4	0	0	0
Elementary (1-4 yrs.)	181	319	50	104
Elementary (5-8 yrs.)	485	740	18	70
(9-10 yrs.)	200	281	2	6
(11-12 yrs.)	105	181	3	5
University 1-2 yrs.	17	22	0	2
2-3 yrs.	7	5	0	4
Degree	5	3	0	0
Total Population	<u>1491</u>	<u>2341</u>	<u>168</u>	<u>369</u>
- less those under 5 yrs.	320	489	N.A.	N.A.
Net total	<u>1171</u>	<u>1852</u>	<u> </u>	<u> </u>
Per cent of non-attenders (minus 5-yr. olds) who have less than Grade 8 education	71%	73%	N.A.	N.A.

^{1/} Alberta Bureau of Statistics - Special tabulation. The figures in the table include small hamlets such as Driftpile and Enilda in I.D. 124. They exclude the hamlet of Faust, all of the towns and villages, and the Indian reservations.

The educational level of the labor force in the rural sector of the area is low. Approximately three out of four people (75%) have not attained more than an elementary school education. This compares to less than one in two (43%) for the province of Alberta. The number of rural residents completing elementary education is 29 per cent lower for the Lesser Slave Lake area than it is for Alberta. This indicates a need for additional emphasis on education if the rural people of the area are to be competitive in vocational skills and management ability demanded presently.

In 1966 farms with sales over \$2,500 were classified 'commercial'. The table below shows the numbers of commercial farms categorized by amount of farm sales:

Table 12 FARMS CLASSIFIED BY FARM SALES ^{1/}

	<u>Alberta</u>		<u>C.D. 15</u>		<u>L.S.L. Area</u>	
	<u>No.</u>	<u>% of comm. Farms</u>	<u>No.</u>	<u>% of comm. Farms</u>	<u>No.</u>	<u>% of comm. Farms</u>
1961: 2500-4999	19,017	42	2,374	59	143	52
1966: " "	13,862	28	1,960	41	77	39
1961: 5000-9999	15,976	35	1,328	33	98	36
1966: " "	17,117	35	1,776	37	63	32
1961: 10000-14999	5,076	11	198	5	21	8
1966: " "	8,012	16	612	13	21	11
1961: 15000-24999	3,155	7	71	2	7	3
1966: " "	5,909	12	358	7	24	12
1961: Over 25,000	1,979	5	21	1	4	1
1966: " "	4,071	9	118	2	13	6
<u>Total Commercial Farms</u>		<u>% of Tot. Farms</u>		<u>% of tot. Farms</u>		<u>% of tot. Farms</u>
1961	45,203	61	3,992	45	273	39
1966	48,971	71	4,824	54	198	29
<u>Total Farms</u>						
1961	73,212		8,955		697	
1966	69,411		8,868		691	

^{1/} D.B.S.

The definition of a commercial farm was different in 1961 and 1966 (see comments following Table 4). The above table stratifies farms on the basis of the 1966 definition which designates farms grossing over \$2,500 annually as commercial farms.

While the number of commercial farms increased 10 per cent in the province and 9 per cent in C.D. 15, the trend in the Lesser Slave Lake area was in the opposite direction. There was a drop of 10 per cent in the number of commercial farms. The total farms in the area remained almost constant (697 in 1961 and 693 in 1966). Expansion of farm sales, which would lift farms into the commercial categories, did not occur. With almost 500 farms having gross farm sales below \$2,500 there is a serious farm adjustment problem. Low family incomes, stemming from low farm sales in the Lesser Slave Lake area (500 farms have less than \$2,500) do not permit farm families to make necessary improvements to buildings, machinery and farm technology. Low incomes also restrict land consolidation and improvements. Low incomes also limit expenditures on health, education, and other services. Expansion of farm sales is necessary to achieve full farm employment, modernize farm operations and to raise family income levels. Possible internal farm improvements and implications have been listed above in the example on dairying. To alleviate the lag in farm adjustment it is also necessary to have external changes and to implement farm policies which would:

1. increase the farm size eg. judicious use of credit and subsidies
2. improve farm management and level of farm technology eg. extension education
3. assist low-income farm families wishing to leave agriculture with:
 - a. adjustments to other employment
 - b. acquiring saleable vocational and technical skills
 - c. counselling regarding alternative opportunities
 - d. early retirement
4. assist those remaining in agriculture through:
 - a. farm consolidation and farm improvement
 - b. improved credit arrangements for short, intermediate, and long-term needs
 - c. assistance with crops and livestock improvement programs
 - d. assistance with building and machinery improvements
 - e. general educational programs to make agriculture more viable and competitive with other regions

An example of improvements in farm production is presented in the two tables below.

Table 13 DAIRY PRODUCTION IN C.D. 15

	<u>1956</u>	<u>1961</u>	<u>1966</u>
Total milk Production (May) <u>1/</u>	6,216,907	6,732,040	6,338,910
Annual Production <u>2/</u>	43,581,349	47,124,280	44,370,370
Cows Milked Yesterday (May) <u>3/</u>	10,992	10,488	7,072
Annual Average Milk Per Cow	3,959	4,493	6,274
Annual Average B.F. Per Cow <u>4/</u>	138	157	220

Table 14 EXAMPLE OF COSTS AND RETURNS FOR DAIRYING

	<u>200 lbs. B.F. (5,700 lbs. milk)</u>	<u>300 lbs. B.F. (8,600 lbs. milk)</u>	<u>400 lbs. B.F. (11,400 lbs. milk)</u>
Feed Required <u>5/</u>			
- barley, bu.	-	43 @ 90¢ = \$38.70	52 @ 90¢ = \$46.80
- comm'l feed, lbs.	-	150 @ 4¢ = \$6.00	250 @ 4¢ = \$10.00
- hay, tons	6 @ \$20 = \$120	6 @ \$20 = \$120.00	6 @ \$20 = \$120.00
- pasture, 1 1/2 T/ac	3ac @ \$10 = <u>\$30</u>	3ac @ \$10 = <u>\$30.00</u>	3ac @ \$10 = <u>\$30.00</u>
Total Feed Costs	\$150	\$194.70	\$206.80
Possible Returns - Cream @ 90¢ a lb. <u>6/</u>	\$180	\$270.00	\$360.00
Possible Returns Over Feed Cost	\$30	\$75.00	\$153.00
To achieve \$3,000 return would require	100 cows	40 cows	20 cows

1/ D.B.S.

2/ The production for May was multiplied by 7 to get the annual production. Although there are full-time dairy farmers in the area, there are also many who milk cows only in the summer months, hence, the assumption in the calculations.

3/ D.B.S. Cows 'milked yesterday' were used in the calculation, not total cows reported on farms.

4/ Butter fat of milk is assumed at 3.5%.

5/ Feed requirements assume good efficiency, quality forage and pasture.

6/ Price assumed includes 30¢ a lb. government subsidy, and 'special' grade.

Under intensive dairy production practices, calves are sold when they are several days old. Returns from such calves would likely be 10 to 20 dollars. In small dairy herds, calves are usually vealed-out and sold at somewhat higher prices; approximately \$40 - \$50. These returns can be added to returns on milk production shown in the example.

The annual dairy production per cow milked in C.D. 15 is estimated to be 220 pounds of butter fat in 1966. (Table 13) A cow producing this amount of butterfat produces very little financial return which can be applied to costs of building, equipment and labour. As production per cow increases to 300 pounds and then to 400 lbs. of butterfat per animal, returns increase rapidly. The reason behind this is that hay and pasture requirements are essentially the same for cows of different levels of production. Even if a cow produces no milk, forage is required for body maintenance. Also some milk production is possible on forage alone without grain or commercial protein and mineral supplements. Through selection of dairy animals, proper management, and improved feed rations, it is very possible to have dairy herds average 400 lbs. of butterfat annually. The annual income desired by a dairy farmer from dairying can be derived by multiplying the level of production by the price and subtracting all costs incurred in production.

The implications for area dairy farmers in the above example are:

1. the need for improvement of dairy stock,
2. increasing level of production per animal to reduce costs per unit of production,
3. improved dairy management,
4. the 1966 dairy herd size of 3.3 cows is much too small; herd sizes must increase,
5. competition from dairy areas in the provinces will substitute the lagging dairying industry in the area or force improvements

which will make dairying in the block more competitive to other dairy regions of the province.

The economic principles and implications cited in the 'Example of Costs and Returns for Dairying' also hold true for other agricultural enterprises: expanding size along with improved efficiency, minimizing unit costs along with expanded farm sales, improving farm management as well as other internal changes are essential in creating viable farm units and in improving farm incomes in the Lesser Slave Lake area.

MINK RANCHING

Mink ranches are included in the agricultural census by the Dominion Bureau of Statistics. As a group, then, the mink ranchers have been considered with other kinds of farmers in the agricultural section of this report. Since mink ranching, however, involves very small amounts of soil resources, it is sometimes considered as a non-agricultural enterprise. For this reason, and because it comprises a large portion of farming in I.D. 124, mink ranching is given separate attention.

Table 15 MINK RANCHERS IN LESSER SLAVE LAKE AREA ^{1/}

Location	No. of Ranchers			No. of Mink		
	1966 (Aug. 31)	1967- 1968	% Change	1966 (Aug. 31)	1967- 1968	% Change
Canyon Creek	24	14	- 41	19,314	19,260	
Kinuso	9	5	- 44	3,571	1,609	
Faust	24	16	- 33	21,674	17,559	
Slave Lake	9	5	- 44	6,535	44,505	
Joussard	29	14	- 52	12,985	8,394	
Widewater	35	32	- 8	42,697	1,609	
TOTAL	130	86	- 34	106,776	92,936	- 13

Since the table above was prepared, additional mink ranchers have closed their operations, but no estimates are available of the number of exits from the industry.

The sale of mink pelts returned nearly \$1,000,000 to the mink ranchers in the 1967 - 1968 season. Mink rations consist of 60 - 70 per cent fish and animal by-products. The industry uses approximately 5,000,000 pounds of fish annually. Lesser Slave Lake has produced this amount of fish, primarily tullibee,

^{1/} Data provided by Robert W. Gilles, Supervisor, Alberta Fur Farms Branch, Edmonton.

in recent years. At 4¢ per pound this adds \$200,000 in income to the area. The total impact, at a primary level amounts to approximately 1.2 million dollars. Mink ranching is an important industry in the area because of a substantial contribution to the gross regional product and because of the multiplier effect of income injection at the primary level. The recommendations for agricultural adjustment as stated previously should be adjusted and then applied to the mink industry.

MUNICIPAL FINANCE IN THE
LESSER SLAVE LAKE AREA

By

Leo Regehr

MUNICIPAL FINANCE;
TOWNS AND VILLAGES IN THE
LESSER SLAVE LAKE AREA

Introduction

The four urban municipalities in this study include the towns of High Prairie, Slave Lake, Swan Hills, and the Village of Kinuso. For ease of expression, the Village of Kinuso and the towns will be referred to as centres when they are treated as a homogenous group.

The four centres under study have relatively low per capita property values. This fact reflects itself in high tax rates and low tax revenues per capita. Local expenditures per capita in Swan Hills and High Prairie are comparable to other centres in Alberta, while Kinuso and Slave Lake have comparatively low per capita expenditures for local services. All four centres have limited working capital.

A combination of limited working capital, high tax rates, and relatively small tax bases precludes significant increases in services which can be financed locally at this time.

An increase in the tax base for the four centres, resulting in higher tax revenues is the preferred way to finance future services within a municipality, but the extent to which this is occurring now or is likely to occur in the future, is outside the scope of this study.

Mill Rates and Assessments

If grants in lieu of taxes are added to the tax levies, the equalized mill rates thus calculated are seen to be much higher in this area than in other towns and villages in Alberta. These relationships are illustrated in the following table.

Table 1 ALL PROPERTY TAXES COMPARED IN MILLS ^{1/} - 1966

Centres	Equalized ^{2/} 1966	Not Equalized ^{3/} 1966
Slave Lake	104.7	93.2
High Prairie	79.7	80.8
Swan Hills	78.1	69.1
Kinuso	73.0	74.6
All Towns and Villages	72.2	66.7
All Cities	64.4	58.2

There is a marked variation in the assessment base per capita among these four centres; they are, in each case, below the average assessment per capita in Alberta. (See Table 2.)

Special property improvement taxes, when added to the levy, bring calculated mill rates to higher values than other urban areas. These observations are illustrated on the following pages. (See Figures 1 & 2.) Tax rates in these four centres are above those of other towns and villages in the province, and especially above those of the cities. Furthermore, these higher mill rates yield lower per capita revenues than in other centres generally. Lower revenues per capita, thus, partly reflect the smaller per capita tax bases mentioned earlier.

^{1/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.
 Alberta Department of Municipal Affairs; The Alberta Municipal Counsellor, Equalized Municipal Assessments, Volume 12, No. 3, April 1967, pp. 4-6.

^{2/} Tax levies, net of business taxes, plus grants in lieu of taxes, are summed and divided by the equalized assessments to yield tax rates which are comparable from one region to another.

The equalized assessment for a given year is calculated the following year. Hence, for 1966 the equalized assessment for 1967 is used. The particular assessment manual used by a municipality, the value of property held by provincial and federal governments, and the timing of the equalization assessments, account for the disparities between the equalized and non-equalized mill rates.

^{3/} Obtained by dividing the tax levies by the assessments as reported by the municipalities in 1966. Business taxes are excluded.

Local tax revenues are obtained mainly from property holders. (See Table 3 and Figure 3.) There are, however, occasional marked exceptions such as Swan Hills which has a rather diversified tax base. In contrast to Swan Hills, the Village of Kinuso is almost entirely dependent upon property (specifically building and improvement taxes) as the local revenue source.

Working capital equal to one-third of the year's tax levy usually enables a municipality to avoid short-term loans during the year when revenue collections are low and cash requirements are high. Kinuso has a high working capital position, both in terms of its levy, and on a per capita basis. The other centres also have working capital at or near that of similar centres in the province. On a per capita basis, however, the working capital of these other centres is low. (See Figure 4.)

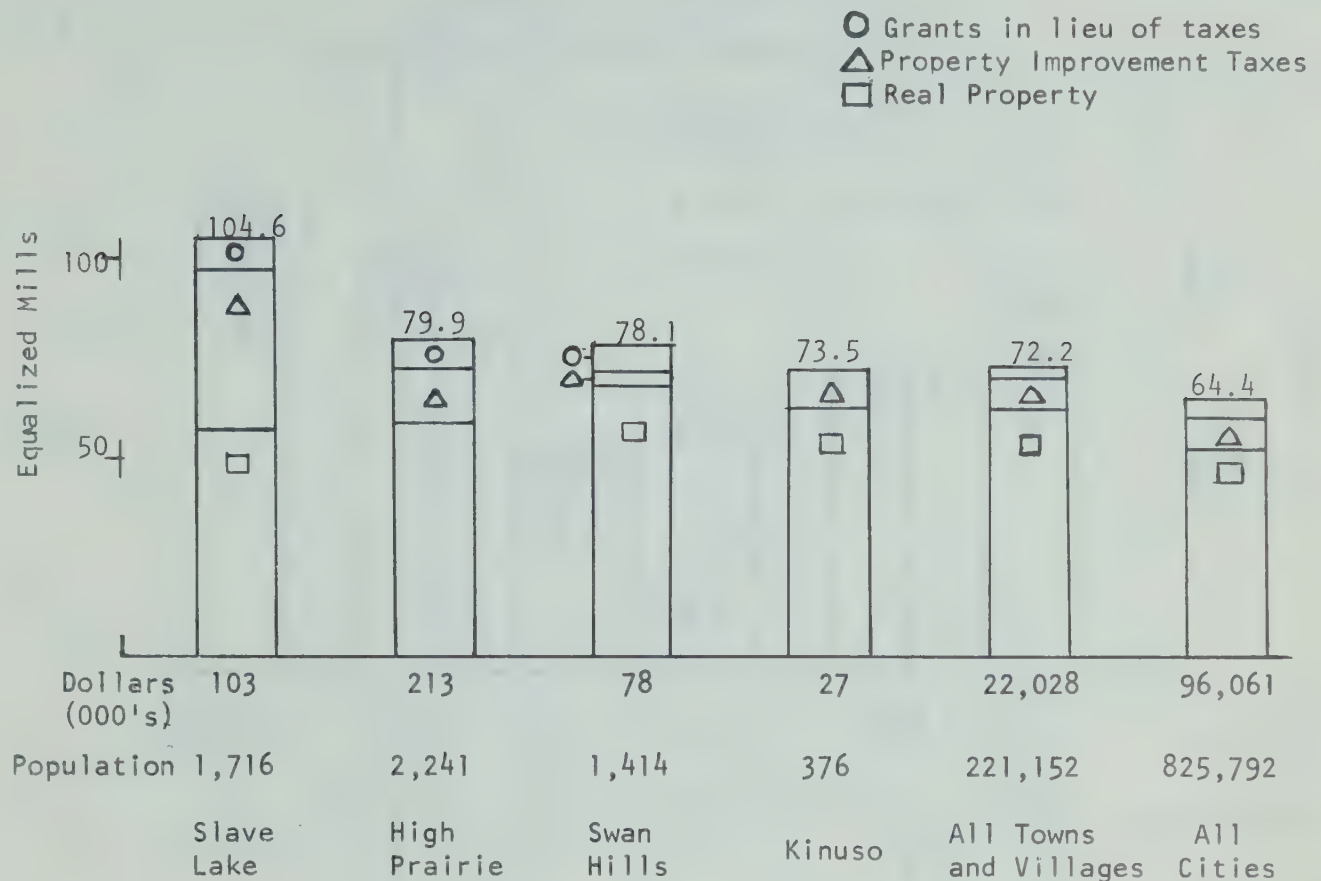
Can Services be Expanded Now?

A significant expansion of services by any of the four centres would have to be financed out of current working capital or increased tax levies.

It might appear that of the four centres, Kinuso could expand its services since its working capital is high in relation to its total levy and compared with the population of the town. (See Figure 1.) However, the total dollar value of its surplus is only \$23,000. If \$8,000 of this surplus is retained, then only \$15,000 would be left to expand services. An expansion beyond this (assuming other revenues and expenditures remained unchanged) would force a rise in the tax levy, which is already above the average for towns and villages. (See Figure 2.)

The towns of Swan Hills, High Prairie, and Slave Lake have available

Figure 1 ADJUSTED PROPERTY TAX REVENUES ^{1/} - 1966 ^{2/}
IN EQUALIZED MILLS AND IN DOLLARS

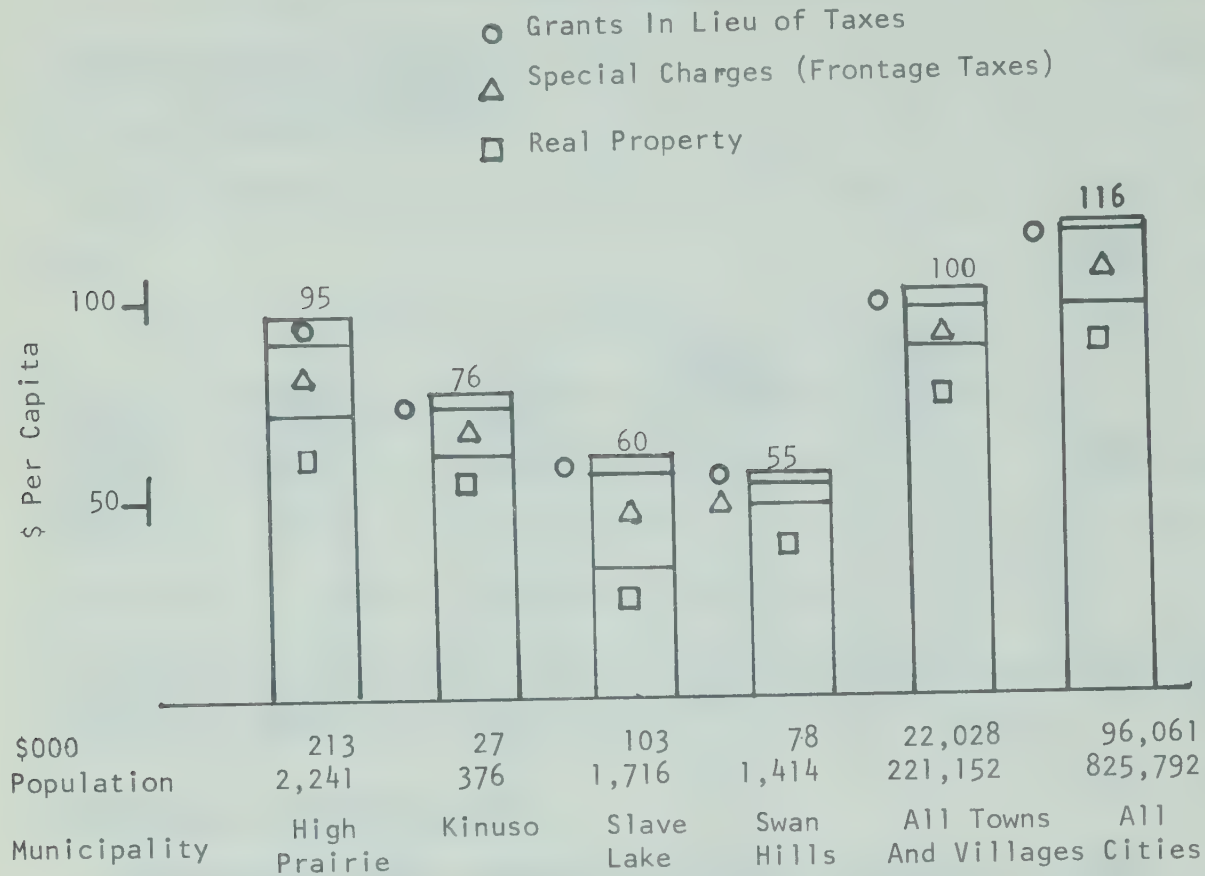


^{1/} Excludes Business tax, but includes government grants in lieu of taxes. Based on all revenue-producing property including provincial and federal.

^{2/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.

Alberta Department of Municipal Affairs; The Alberta Municipal Counsellor, Equalized Municipal Assessments, Volume 12, No. 3, April, 1967, pp. 4-6.

Figure 2 ADJUSTED PROPERTY TAX REVENUES ^{1/} - 1966 ^{2/}
IN DOLLARS AND IN DOLLARS PER CAPITA



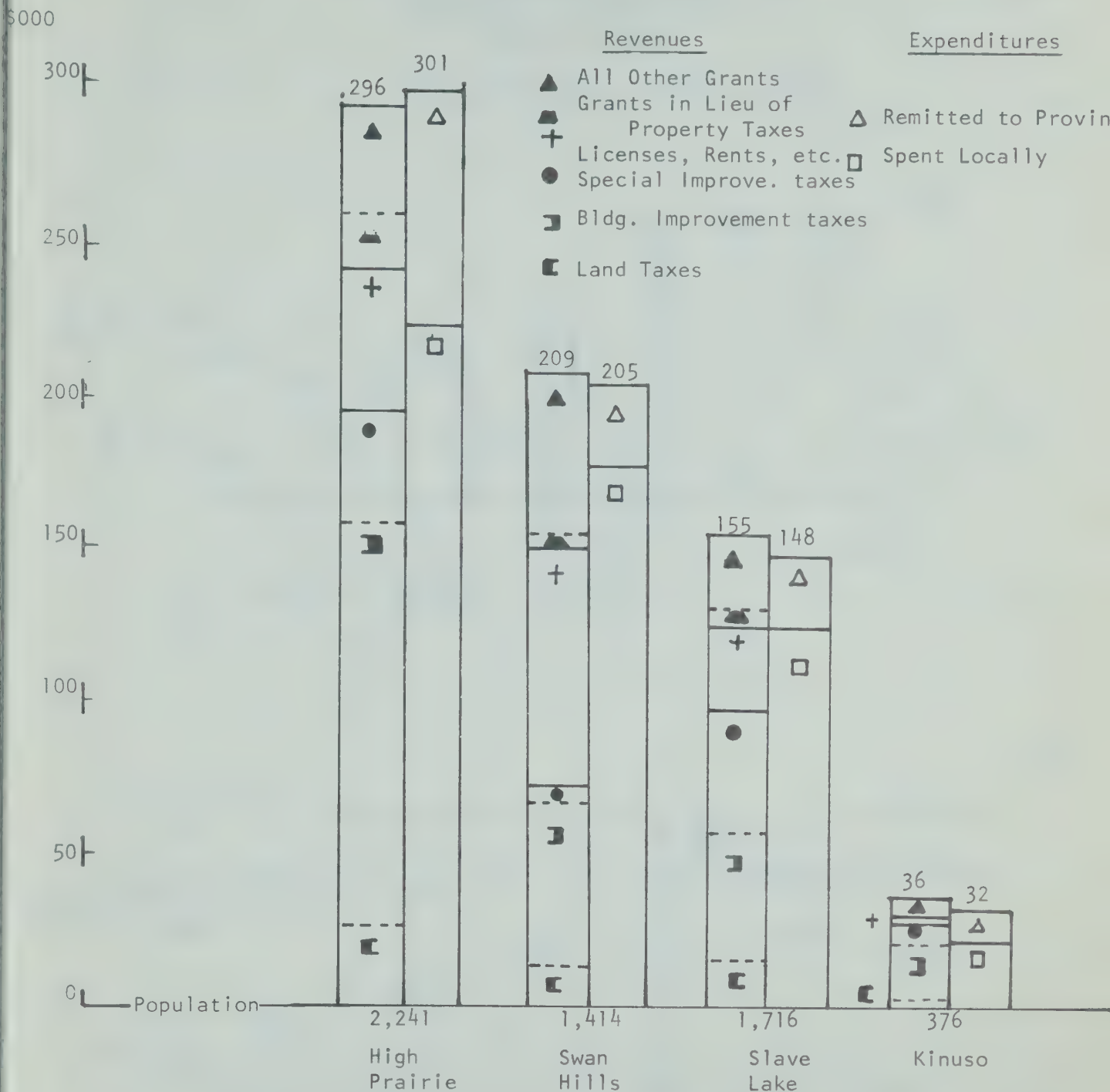
^{1/} Excludes Business Taxes, but includes government grants in lieu of property taxes.

^{2/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer Edmonton, 1968.

Alberta Department of Municipal Affairs; The Alberta Municipal Counsellor, Equalized Municipal Assessment, Volume 12, No. 3, April, 1967, p. 4-6.

Figure 3

REVENUES AND EXPENDITURES ANALYZED 1966 ^{1/}
(IN 000's OF DOLLARS)

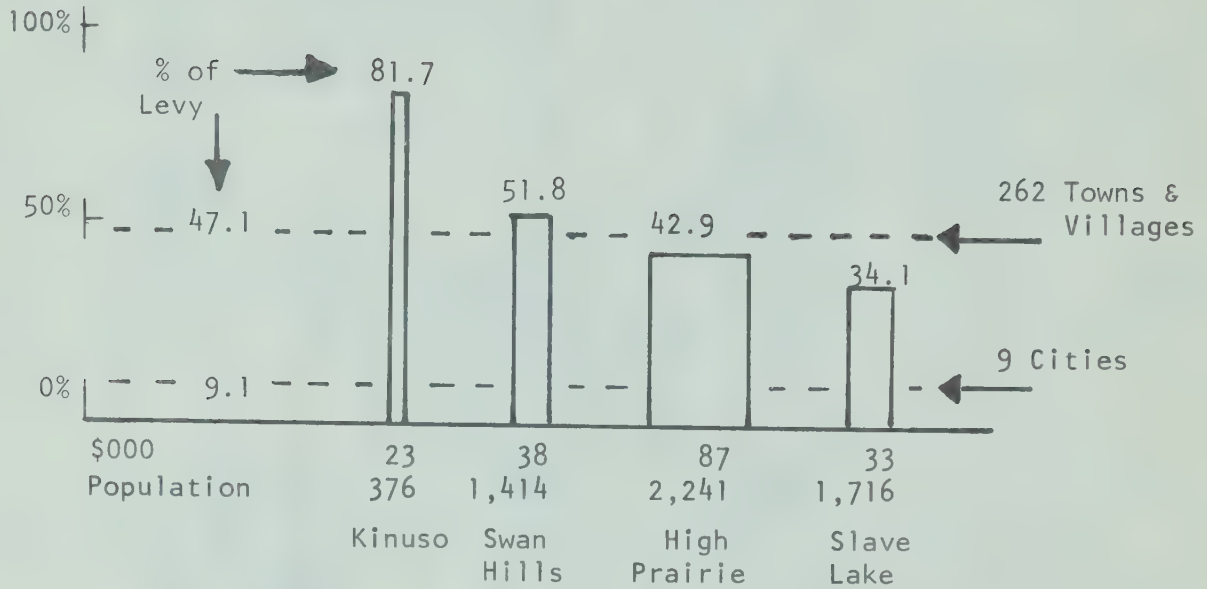


^{1/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.

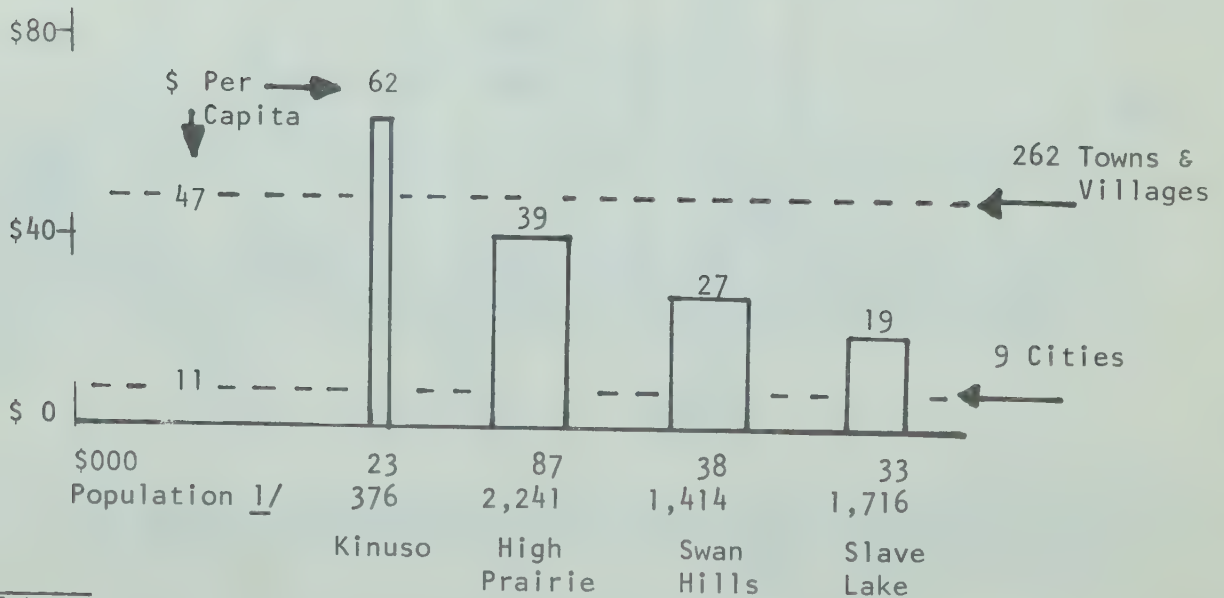
Figure 4

WORKING CAPITAL COMPARISONS 1966 ^{1/}
AS A % OF THE LEVY, PER CAPITA,
AND IN DOLLARS

(a)



(b)

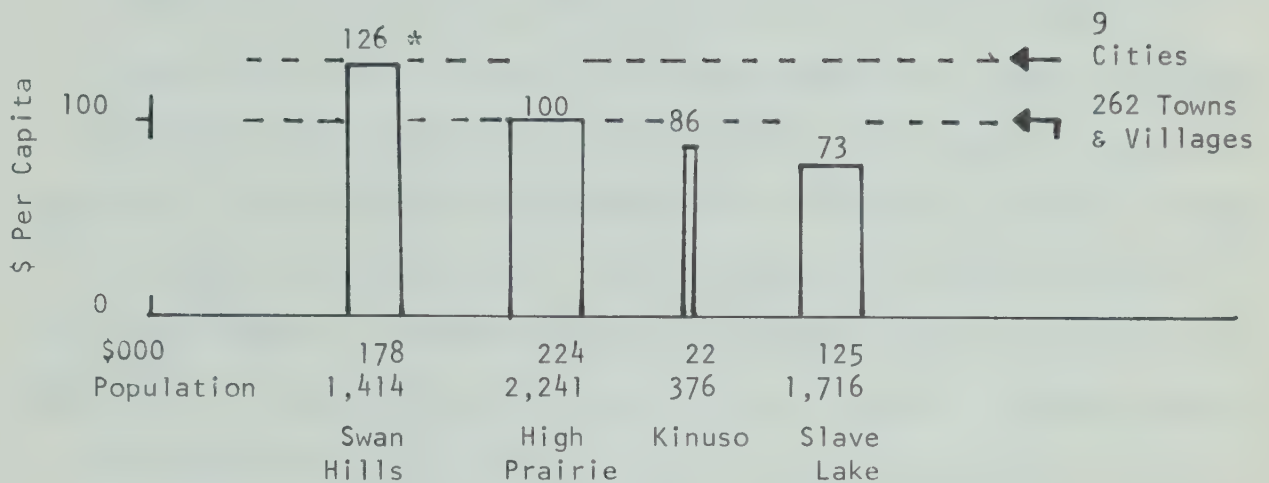


* Area of bar represents total dollars for that particular centre

^{1/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.

Figure 5

LOCAL EXPENDITURES COMPARED - 1966 ^{1/}
IN PER CAPITA AND TOTAL DOLLARS



* Swan Hills in 1966 received non-recurring \$50,012 from I.D. No. 123.

^{1/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.

working capital in good relation to the total tax levy, but in each case the per capital value of their surpluses are below other centres in Alberta (See Figure 1)*. Furthermore, their mill rates are at or above the provincial averages for towns and villages. Consequently, it is doubtful that any of these three towns could now decide to expand their services significantly.

Are Present Services Comparable to Those in Other Towns and Villages?

The towns of High Prairie and Swan Hills are presently (in 1966) spending as much or more money per capita locally as other towns and villages in Alberta. (See Figure 3.) If one assumes that the money is spent on the very same service as elsewhere, and that the cost of services is the same throughout the province, then it may be concluded that the services in High Prairie and Swan Hills are comparable to other towns and villages generally (though they might not fully satisfy peculiar local needs).

The Village of Kinuso and the Town of Slave Lake spend less money per capita locally than do other towns and villages. (See also Figures 4 & 5.) If the above assumptions are used, one may conclude that services in these towns are not comparable to those in other towns and villages.

Can Services be Expanded in the Future?

A significant and sustained expansion of services by a municipality must be accompanied by sustained economic growth and development, in the absence of increased grants. Consequently, an opinion on how much a municipality can afford to spend in the future depends upon an assessment of its present economic conditions, and assumptions concerning the economic future.

* The terms "working capital" and "surplus" are used interchangeably.

It is not the primary purpose of this study to analyze and project the economic conditions for any of the four centres. However, statistical information is available from the municipalities' published financial statements which may be useful for such an economic analysis.

Table 2
SELECTED ASPECTS OF TAXATION - 1966 ^{1/}

	Equalized		Not Equalized		Population	Equalized Assessment Per Capita \$
	Assessment	Net Levy	Assessment	Net Levy		
	\$000					
High Prairie	2,673	213	2,426	196	2,241	1,193
Kinuso	370	27	362	27	376	983
Swan Hills	999	78	1,056	73	1,414	706
Slave Lake	984	103	1,041	97	1,716	573
262 Towns and Villages	305,131	22,028	319,327	21,287	221,152	1,380
9 Cities	1,492,644	96,061	1,571,125	91,506	825,792	1,808

^{1/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.
 Alberta Department of Municipal Affairs; The Alberta Municipal Councillor, Equalized Municipal Assessments, Volume 12, No. 3, April, 1967, pp. 4-6.

NOTE: Business taxes are excluded.

Table 3 ANALYSIS OF LOCAL RECEIPTS - 1966

(IN \$ 000's)

Tax or Revenue	High Prairie	Slave Lake	Swan Hills	Kinuso	262 Towns & Villages	9 Cities
Land Taxes	27	16	14	2	3,007	26,607
In Dollars % of Local Revenues	11.1%	12.8%	9.3%	6.6%	11.5%	23.1%
Building, & Improvement Taxes	132	41	54	21	16,064	52,345
In Dollars % of Local Revenues	54.3%	32.8%	36.0%	70.0%	61.2%	45.4%
Special Improvement Taxes	37	40	5	4	2,216	12,554
In Dollars % of Local Revenues	15.2%	32.0%	3.3%	13.3%	8.4%	10.9%
Total Property Taxes	196	97	73	27	21,287	91,506
In Dollars % of Local Revenues	80.7%	77.6%	48.6%	89.9%	81.1%	79.4%
All Local Revenues ^{2/}	243	125	150	30	26,246	115,204
Grants in Lieu of Taxes ^{3/}	18	6	5	--	648	2,159
Other Grants	35	24	54	6	4,054	33,106
Total Revenues	296	155	209	36	30,948	150,469

^{1/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968

^{2/} Total operating revenues less all grants.

^{3/} Grants in lieu of taxes might be considered as local revenues since they are paid by provincial and federal governments holding property in a given town or village.

Note: Land and Improvement taxes are inferred from their relative assessed values.

MUNICIPAL FINANCE;
IMPROVEMENT DISTRICTS IN THE
LESSER SLAVE LAKE AREA

Introduction

The five I.D.'s in this study include I.D. numbers 123, 124, 125, 128 and 129. Their present financial condition will be discussed relative to all the I.D.'s in Alberta (in which these five are included). Where possible, they will also be compared with the entire group of rural municipalities in Alberta; all I.D.'s, M.D.'s and counties.

Of the five I.D.'s under study, I.D. 123 appears capable of expanding its services over a long period of time. Although its working capital position is only average when compared with its levy, its tax rate is below the provincial average for I.D.'s, and its tax base is substantial. However, the need for large-scale expansion of services might be questioned since so few people live in I.D. 123.

I.D.'s 124 and 125 could expand their services for a short time, until their working capital (relative to the tax levy) is reduced to the average level for all I.D.'s in Alberta. Beyond this, their mill rates which are already higher than elsewhere would have to be increased.

I.D. 128 has little working capital. Although its equalized mill rate is low, its tax base is too small to yield significant new revenues if the mill rate is increased. Local expenditures are low in per capita terms, indicating a possible need for increased services.

I.D. 129 has a low working capital relative to its tax levy, but since its population is also small its surplus appears to be above average on a per capita basis. Its tax levy appears to be average or even low (in per capita terms). Its equalized tax base of \$1,440 per capita is not much below \$2,163 which is the average for all I.D.'s in Alberta. In per capita

terms, I.D. 129 spends less than half of what other I.D.'s spend on local services. Consequently, a need for increased services might be presumed to exist.

Mill Rates and Assessments

Compared with other rural areas, present tax rates are high. The exception to this is I.D. 123, where present mill rate is much lower than the average for all I.D.'s in Alberta. (See Tables 4 and 5.)

Table 4 ALL PROPERTY TAXES COMPARED IN MILLS - 1966 ^{1/}

<u>I.D. No.</u>	<u>Equalized ^{2/} 1966</u>	<u>Not Equalized ^{3/} 1966</u>
128	55.8	64.3
125	45.2	58.8
124	43.2	55.5
129	41.6	42.2
123	28.2	28.2
49 I.D.'s	43.5	42.4
97 I.D.'s, M.D.'s and Counties	63.9	58.4

There is a marked variation in the assessment base per capita. (See Table 5.) I.D. 123, with an equalized assessment of \$10.4 million, has only 86 people in it, whereas I.D. 128 with a 1,100 population has an equalized assessment of only \$288 thousand. With the exception of I.D. 123, the other four I.D.'s have per capita assessments significantly below other rural areas.

^{1/} For footnote, see Page 102.

^{2/} " " " " "

^{3/} " " " " "

Table 4 shows that mill rates in I.D.'s generally are lower than mill rates in M.D.'s and counties. This is because fewer services are provided by I.D.'s themselves. For example, the Provincial Government builds and maintains roads and bridges in all I.D.'s, whereas in M.D.'s and counties these are purely local responsibilities. Furthermore, rural lands north of the 27th base line and west of the 8th township in C.D. 15 are assessed at 80% of their normal value. In addition, I.D.'s have no property improvements to be paid for by special levies. A fuller appreciation of tax rates may be obtained from Figure 6.

In I.D.'s 124, 125, and 129, local residents are charged higher mill rates than in other I.D.'s in Alberta. Furthermore, in these same I.D.'s the tax levies yield lower per capita revenues than elsewhere in the province. (See Table 4 and Figures 6 & 7.)

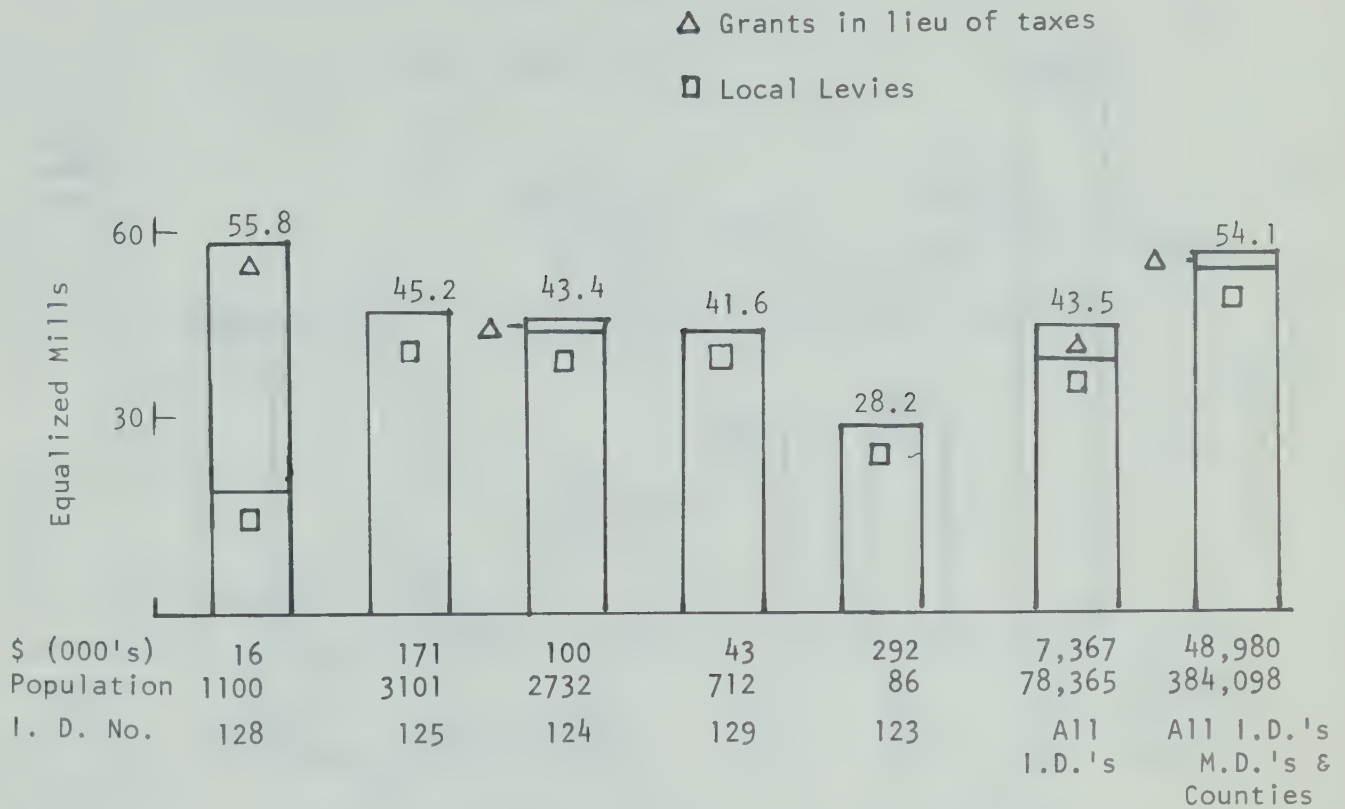
I.D. 128 has both private property taxes and low per capita tax revenues. I.D. 123 enjoys both a lower-than-average mill rate and very high per capita tax revenues because of its very small population.

Revenues and Expenditures

The sources of local tax revenues vary in importance with the peculiarities of individual I.D.'s. Table 6 and Figure 8 show that land taxes may contribute little in dollar value, or in proportion to other tax sources.

Figure 6

ADJUSTED PROPERTY TAX REVENUES ^{1/} 1966 ^{2/}
IN EQUALIZED MILLS AND IN DOLLARS



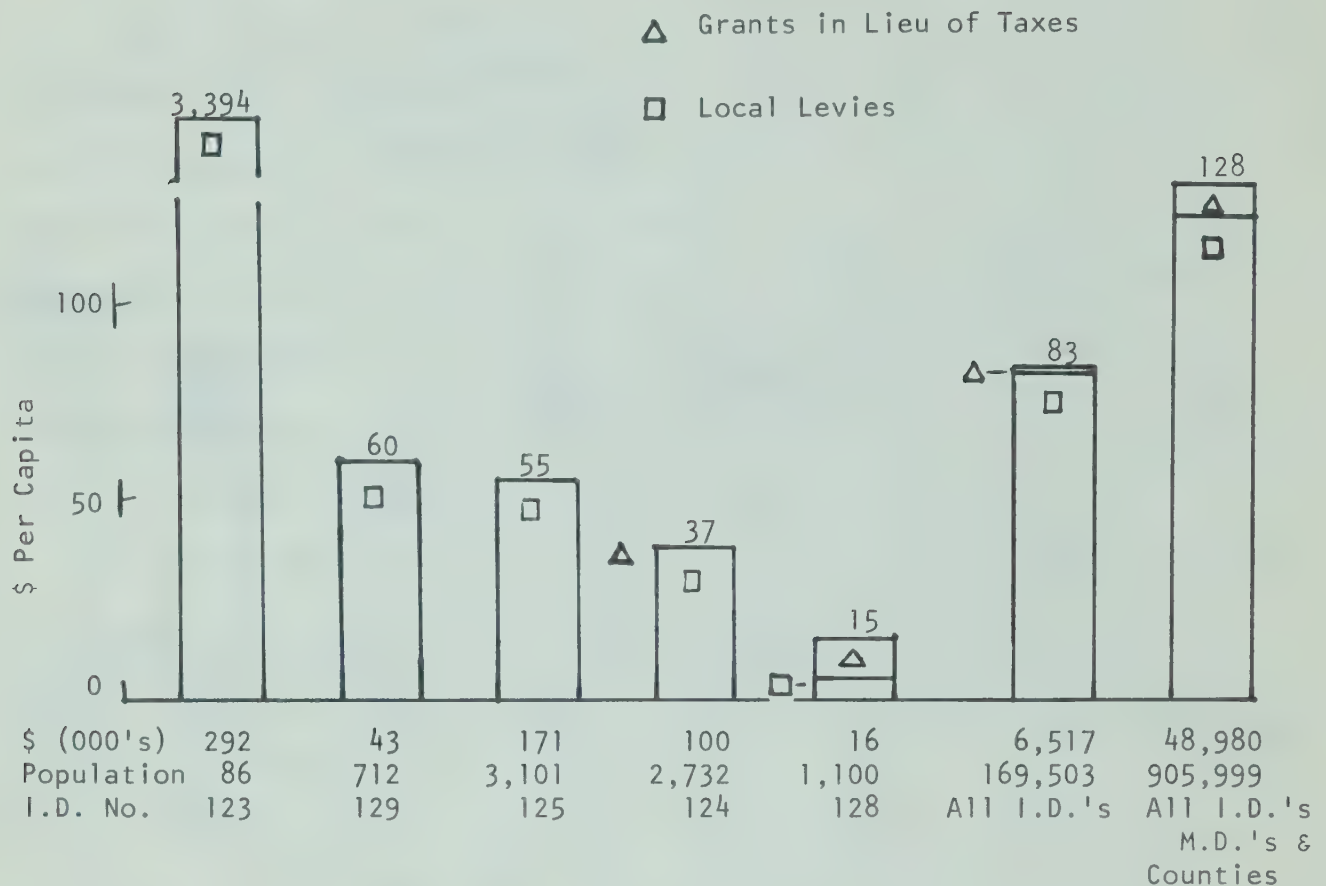
^{1/} Excludes Business tax, but includes government grants in lieu of taxes.

^{2/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.

Alberta Department of Municipal Affairs; The Alberta Municipal Counsellor, Equalized Municipal Assessments, Volume 12, No. 3, April, 1967, pp. 4-6.

Figure 7

ADJUSTED TAX REVENUES ^{1/} 1966 ^{2/}
IN DOLLARS AND IN DOLLARS PER CAPITA

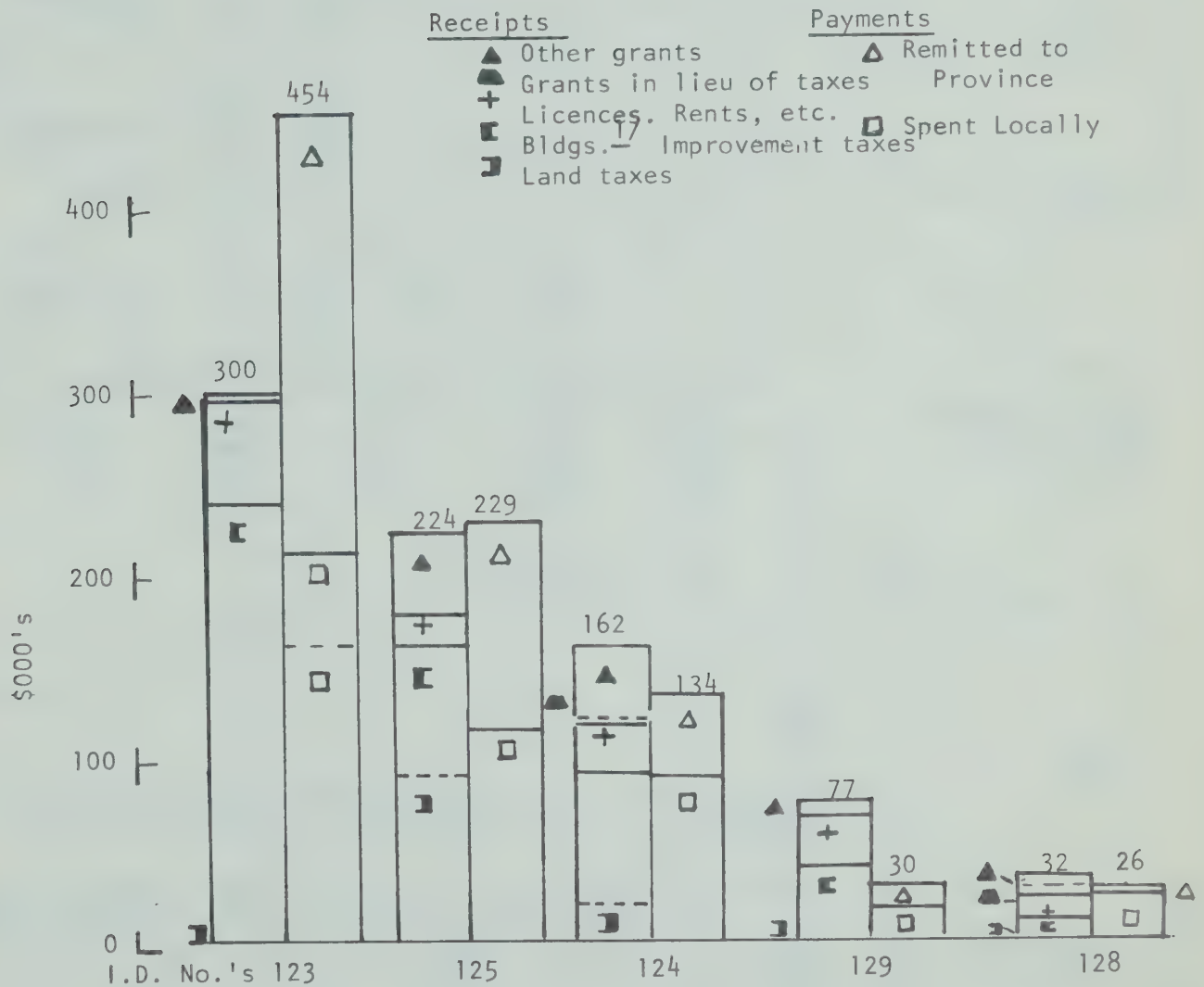


^{1/} Excludes Business tax, but includes government grants in lieu of taxes.

^{2/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.

Alberta Department of Municipal Affairs; The Alberta Municipal Counsellor, Equalized Municipal Assessment, Volume 12, No. 3, April, 1967, pp. 4-6.

Figure 8 RECEIPTS AND PAYMENTS ANALYZED
(\$000's)



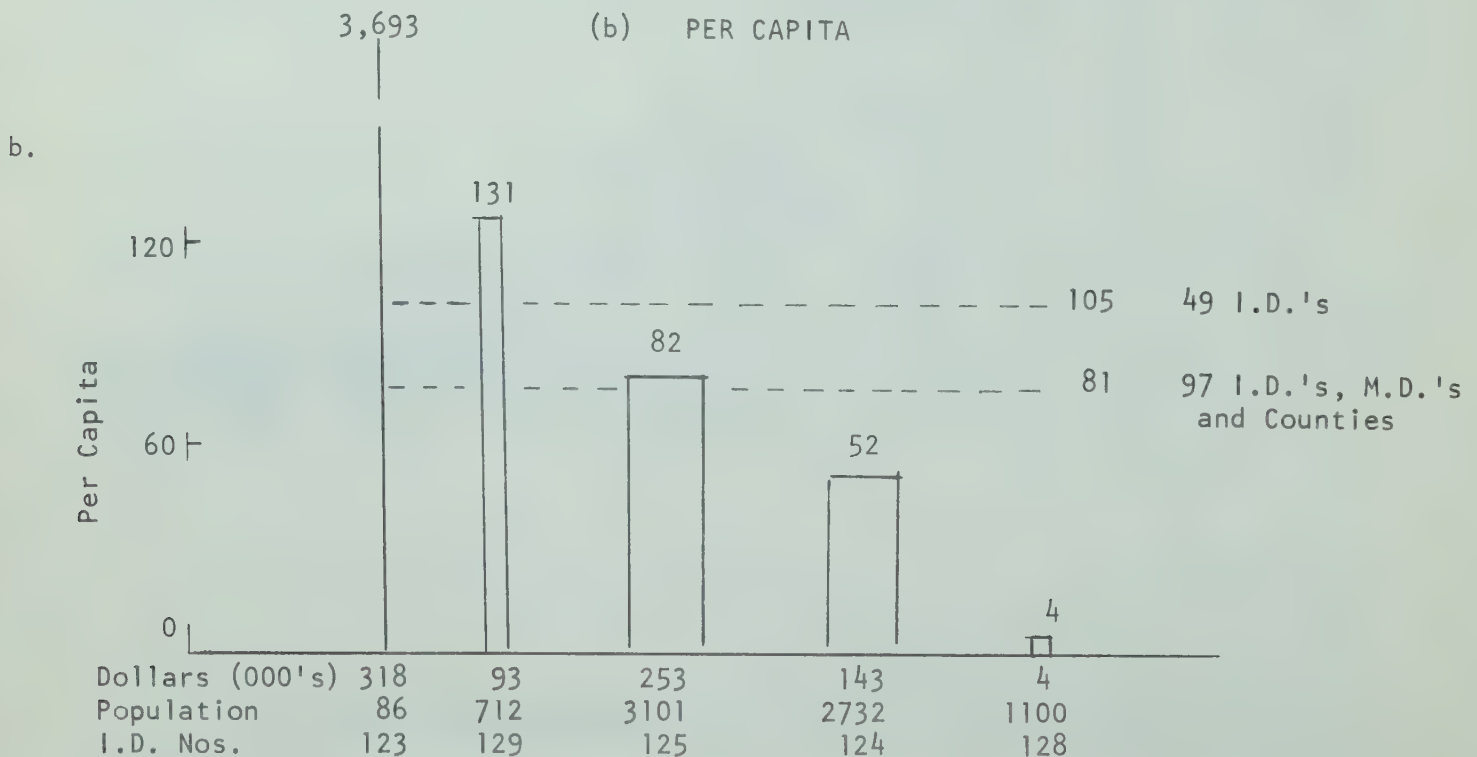
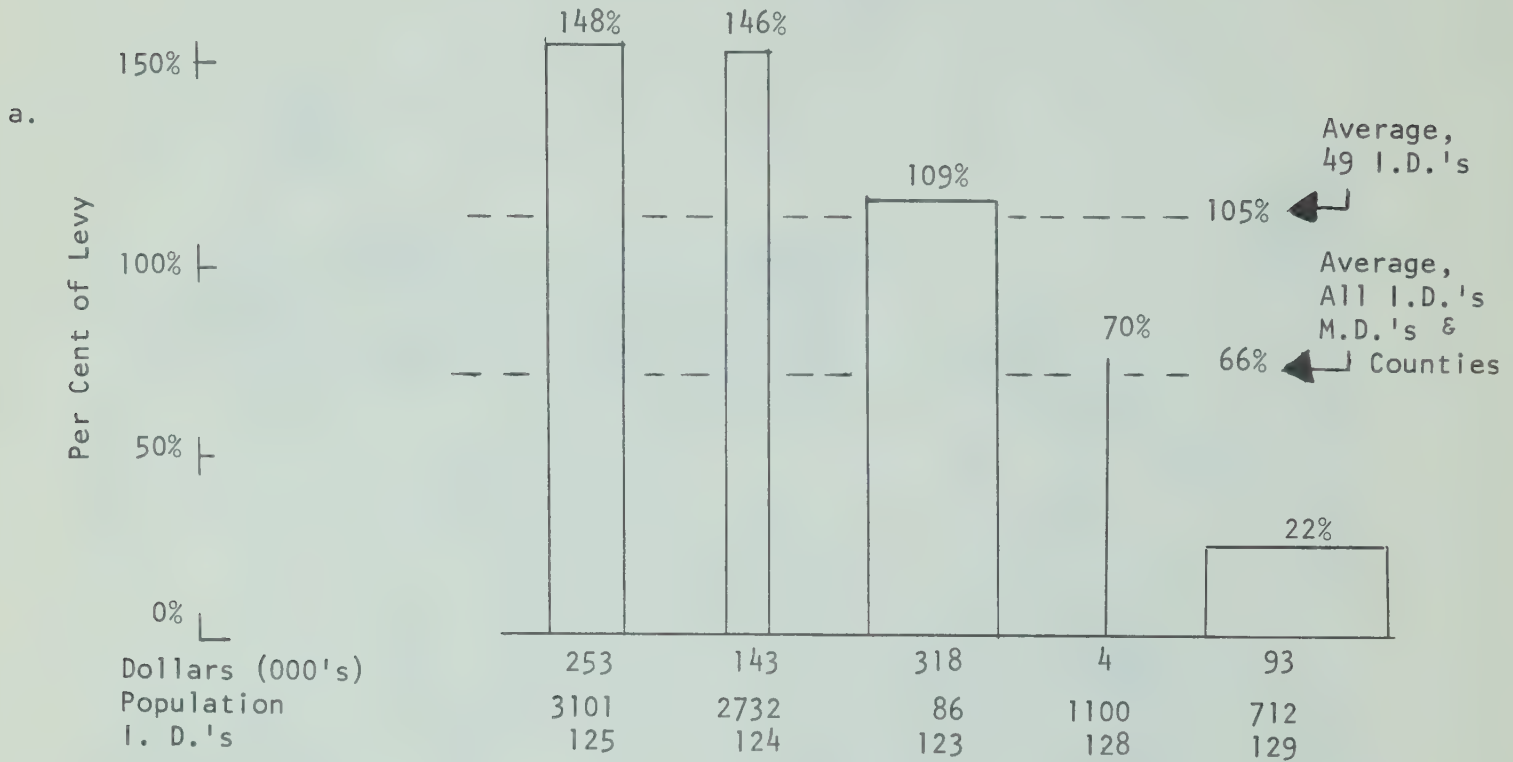
* Grant of \$50,012 to the town of Swan Hills (within this I.D.)

1/ Includes buildings in hamlets.

2/ Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.

Figure 9

WORKING CAPITAL COMPARISONS (1966) ^{1/}
AS A % OF LEVY AND IN DOLLARS

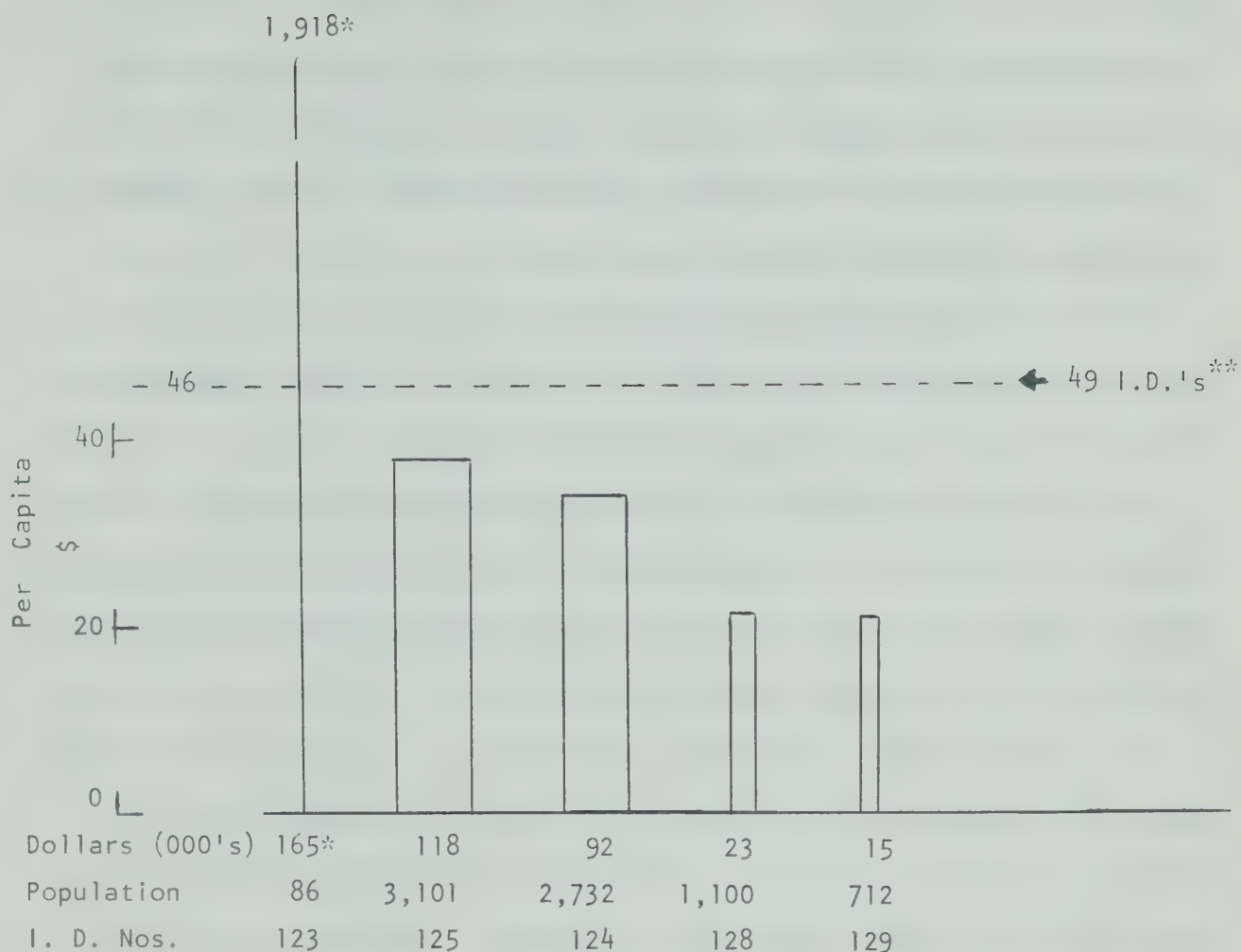


^{1/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.

Alberta Department of Municipal Affairs; The Alberta Municipal Counsellor, Equalized Municipal Assessments, Volume 12, No. 3, April, 1967, pp.4-6.

Figure 10

LOCAL EXPENDITURES ^{1/} COMPARED 1966 ^{2/}
IN DOLLARS AND IN DOLLARS PER CAPITA



* Does not include \$50,012 donated to the town of Swan Hills.

** Value for 97 I.D.'s, M.D.'s and Counties is \$108 per capita.

^{1/} Total expenditures less new houses to the province for the School Foundation Program and the Hospital Benefits Plan.

^{2/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.

Alberta Department of Municipal Affairs; The Alberta Municipal Counsellor, Equalized Municipal Assessments, Volume 12, No. 3 April, 1967; pp. 4-6.

Working Capital

The working capital positions of I.D.'s generally is kept higher than that of M.D.'s and counties. This is mainly because the I.D.'s are not incorporated and, therefore, cannot make short-term loans during the year when their cash requirements are high. Figure 9 shows I.D.'s 124 and 125 to have exceptionally high surpluses relative to their tax levy. But on a per capita basis, their surpluses are low.

I.D. 123's working capital compares favourably with other I.D.'s generally when compared to the tax levy, but due to its small population, its working capital per capita is exceptionally high.

I.D. 128 has a relatively low working capital position, both in terms of its tax levy and on a per capita basis. I.D. 129 has a low working capital position relative to its levy, but due to its small population its position is more favourable on a per capita terms.

The question may be asked whether the five I.D.'s are providing services comparable to other rural municipalities. Since I.D.'s depend upon the province for some of the services which M.D.'s and counties provide for themselves, strict comparisons are not possible. Consequently, the five I.D.'s are compared in Figure 10 to the other I.D.'s in Alberta. This figure shows that I.D. 123 spends far more on a per capita basis than do other I.D.'s in Alberta. I.D.'s 124 and 125 spend somewhat less than other I.D.'s, and I.D.'s 128 and 129 spend less than half as much money per capita as do other I.D.'s in the province.

If one assumes that a given I.D. spends its money on the very same services, and that the per capita cost of services are the same throughout Alberta, then it may be concluded that I.D. 123 provides services which are more than comparable to other I.D.'s, and that the other four I.D.'s do not provide comparable services.

In as much as the above assumptions are open to some question, Figure 10 can at best be a rough indicator of the level of services provided in the five I.D.'s.

A municipality must finance a significant expansion in its services from one or more of several sources: These sources are: 1) its present working capital, 2) increased mill rates, and 3) an increased tax base.

The use of current working capital to finance a project is feasible providing the outlay is non-recurring, such as a sports arena, which will pay its own way after it is built, or a purchase of land. However, an additional expenditure which will continue year after year, such as the cost of hiring more teachers, must come out of increased annual revenues. Increased annual revenues are basically the result of a higher mill rate or an expanded tax base, or both. Increases in tax bases result from economic growth which is dealt with elsewhere.

Table 5
SELECTED ASPECTS OF TAXATION -1966 ^{1/} *

I.D. No.	Equalized Assessment (\$000)	Levy	Not Equalized Assessment (\$000)	Levy	Population	Equalized Assessment Per Capita \$000
123	10,364	292	10,359	292	86	120,512
129	1,025	43	1,013	43	712	1,440
125	3,783	171	2,908	171	3,101	1,220
124	2,308	100	1,757	98	2,732	845
128	288	16	86	6	1,100	262
99 I.D.'s	169,503	6,517	150,995	6,409	78,365	2,163
97 I.D.'s, M.D.'s and Counties	905,999	48,980	809,659	47,312	384,098	2,359

* Business taxes are excluded.

^{1/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.
 Alberta Department of Municipal Affairs; The Alberta Municipal Councillor, Equalized Municipal Assessments, Volume 12, No. 3, April, 1967, pp. 4-6.

Table 6
ANALYSIS OF LOCAL RECEIPTS 1966 ^{1/}
\$

Tax or Revenue	Swan Hills 1.D. 123	Lesser Slave Lake 1.D. 124	High Prairie 1.D. 125	Wabasca 1.D. 128	Atikameg Gift Lake 1.D. 129	North & West Alta. 49 1.D.'s	97 1.D.'s, M.D.'s & Counties**
Land	1,616	22,344	35,198	32,169	511	1,381,836	26,877,312
Taxes	0.5	18.7	47.1	1.9	0.8	20.9	54.1
^{2/} Buildings & Improvements Taxes	239,512	70,449	78,550	5,451	42,516	4,321,159	19,727,985
	80.4	58.8	43.4	27.7	61.5	65.4	39.7
Total Property Taxes	241,128	92,793	163,748	5,831	43,067	5,702,995	46,705,297
	80.9	77.5	90.5	29.6	62.3	86.3	
All Local Receipts *	298,031	119,777	180,857	19,688	69,092	6,602,669	49,708,092
Grants in Lieu of Taxes ^{3/} Other Grants	---	2,544	---	10,574	---	107,975	1,668,876
	1,609	39,798	43,217	1,907	7,840	970,132	16,836,439
All Receipts	299,640	162,119	224,074	32,169	76,932	7,680,776	68,213,407

* Total receipts less all grants.

** For the purposes of this table, M.D. and County Revenues are treated as equivalent to Receipts (Rents, Licenses, etc. incl.)

^{1/} Alberta Department of Municipal Affairs; Annual Report 1966, Queen's Printer, Edmonton, 1968.

^{2/} Includes power and pipe lines, and buildings in hamlets.

^{3/} Provincial and federal grants in lieu of taxes might be considered as local revenues since they are paid by provincial or federal governments holding property within the municipalities in question.

THE NATIVE PEOPLE
OF THE
LESSER SLAVE LAKE AREA

by

Clayton A. Sauve

THEORETICAL CONSIDERATIONS FOR SOCIO-ECONOMIC ^{1/} DEVELOPMENT AMONG NATIVE PEOPLE

The following inventory indicates a problem of general social and economic underdevelopment among people of Indian ancestry in the Lesser Slave Lake area. Reserves are overpopulated and resources are underdeveloped; the people show low levels of educational achievement; incomes on reserves and colonies are low, and welfare payments in these areas are, consequently, high.

To attack this problem, rural development research should not only define the problem, but should also indicate a solution to it. Although it is important to describe instances of underdevelopment, a description is inadequate for aiming a development program at the causes of it. The following remarks will attempt to outline some of the variables of social and economic development and to indicate how measurement of them may help in designing and implementing an effective rural development program.

Different Values in Different Cultures

L. R. Gue, Ph. D., researched extensively the values of Cree Indians at Wabasca and compared their value-orientations to non-Indians. The research studied their values in four areas of human life:

1. Human relations
2. Relation between man and nature
3. Human activity
4. Conception of time. ^{2/}

Gue assumed that in each of these areas there are a limited number of choices that people everywhere can make.

In the study, basic data was gathered by means of a questionnaire which consisted of posing questions and providing three choices for a solution. Problems with which the questions dealt and the types of value-orientations implied in the answers are listed on the following page:

^{1/} This introduction is a summary of a more lengthly detailed presentation which is available upon request from the Rural Development Research Branch.

^{2/} Gue, L. R. Ph. D.; Value Orientation In An Indian Community, University of Alberta, Edmonton, 1967 (unpublished doctoral thesis).

Human Relations

individual

group

tradition

Relation Between Man and Nature

mastery

harmony

subjection

Human Activity

doing

self-improvement

being

Conception of Time

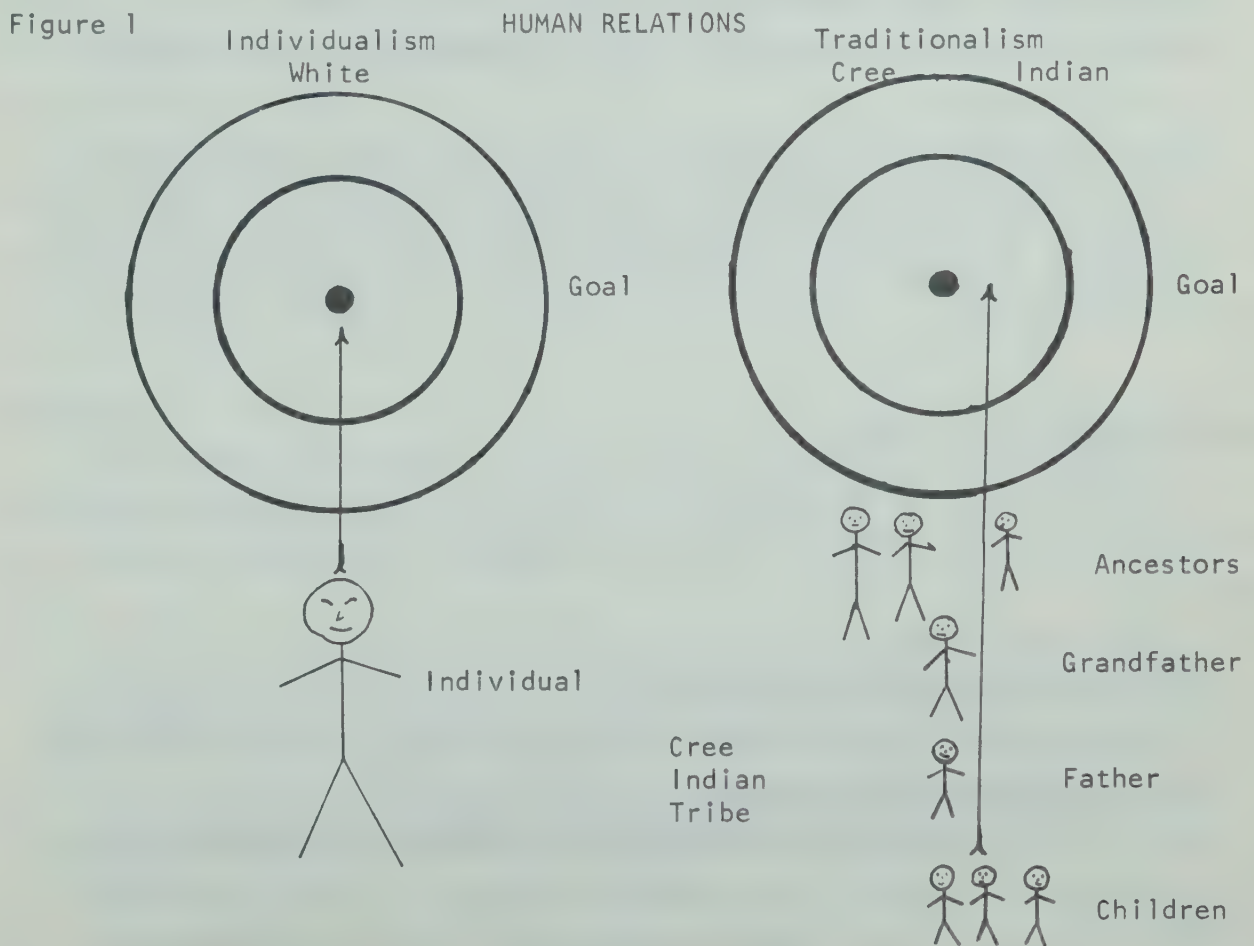
future

present

past

Contrary to common beliefs about native people, both groups were the same in 'Relation of Man to Nature', 'Human Activity', and 'Conception of Time'. Cree Indians and white people chose mastery over nature, both were self-improvement-oriented, and both groups were future-oriented.

Gue found, however, that the two groups were very different in the area of human relations. White people chose an individualistic approach in the area of human relations: Indians chose traditionalism. This difference is illustrated diagrammatically below:



In the white culture the individual sets his goal and the individual works to achieve it. For the Cree culture, the Cree Indian Tribe sets the goal and the Cree Indian Tribe works to achieve it.

The basic implication of these findings for development programs is that Cree Indians have different values than other Canadians, and one cannot expect them to react to a certain program the way non-Indian Canadians would. More specific implications may be:

- program legitimized through older more important leaders
- regular discussions with older more important leaders
- problems should be solved by a committee of which older more important leaders are a part
- development officers should gain acceptance in the traditional structure
- development officers should give information, let it be discussed up and down the traditional structure, and then give help in what is eventually asked for
- someone out of the traditional structure should be boss
- a school program which stresses individual achievement is a threat to Indian culture

Further research should be carried on to determine the value orientations of native people in other communities. Experiments should also be conducted with development programs that are designed to match the values of the people they are intended for.

Disposition Toward Achievement

One social/psychological factor which influences development is peoples' disposition toward achievement. There are essentially three parts to this disposition:

1. need for achievement
2. values relating to achievement
3. implementary values of educational aspiration, vocational aspiration, and knowledge of occupations.

Each of these factors can be measured and compared to the same measurement for people of different socio-economic classes. For the first factor, need for achievement, Luther Tweeten suggests that it can be strengthened

through a broad educational program involving mass media, family counselling, and formal academic and vocational education, each stressing high need for achievement. He also suggests that experiments should be carried out in strengthening it through capital grants and guaranteed incomes. ^{1/}

Research carried out by Mary Strong ^{2/} at the University of Alberta in 1963 shows that values related to achievement, educational aspirations, and vocational aspirations are influenced by native ethnic groups. The implications of this research seems to be that these factors should be measured for native people and a program to raise their level of living should be designed which will match their values and educational and vocational aspirations.

Acculturation

There appears to be a positive relationship between acculturation of Indians and their pattern of gratification, which is considered a pre-requisite to economic growth. If knowledge of white culture and contact with white people are used to measure acculturation, it has been found that Indians, unacculturated to white middle class society, have patterns of immediate gratification in education, work, child rearing, planning, finances and general attitudes.

The preceding relationships seem to imply that gratification patterns can be influenced through programs of acculturation. Experiments should be conducted with regard to the effect upon deferred gratification patterns of native people by programs of cultural information and through programs of intercultural activities.

Alienation

Among the Sioux Indians in South Dakota educational achievement of children is above average until Grade 7. In Grade 7 the children 'cross over' and fall behind the average, to fall further and further behind the

^{1/} Tweeten, Luther; "Socio-Economic Growth Theory", Stimulants to Economic Development, The Departments of Agricultural Economics, University of Alberta and University of British Columbia, Edmonton, 1966.

^{2/} Strong, Mary S.; Social Class and Levels of Aspirations Among Selected Alberta High School Students, Department of Sociology, University of Alberta, Edmonton, 1963. (unpublished master's thesis).

others as they progress.

The concept of alienation, which is essentially a feeling of not belonging accompanied with feelings of helplessness and hopelessness, has been used to explain this 'cross over'. The more Sioux students fell behind, the more they became alienated.

As a result of this information, a course in acculturational psychology has been designed for Sioux students by Rev. Bryde. The course has essentially three parts:

1. Indian history
2. Concept of values
 - Indian values
 - white values
 - conflicts between Indian and white values.
3. Principles for solving conflicts
 - how to adjust to and relieve stress and conflict
 - not ceasing to be an Indian
 - not becoming completely white
 - take the best of two cultures

Physical and Social Isolation

In studying the reasons for dependency on welfare among native people, it was found that the less an Indian community was socially and physically isolated, the more it depended on welfare. The reasons for this phenomenon should be investigated in order to find possible remedies for it.

Conclusions

The preceeding research suggests that in the rural development of native communities, considerable attention will need to be given to cultural values, disposition toward achievement, acculturation, and physical and social isolation.

1/ Bryde, J.; The Sioux Indian Student: A Study In Scholastic Failure and Personality Conflict, Pine Ridge, South Dakota, 1966.

NATIVE PEOPLE OF THE LESSER SLAVE LAKE AREA

The native population of I. D. 124 in 1960 was estimated by B. Y. Card ^{1/} at 44.4% of the total. If it may be assumed that the proportion of native people in I. D. 123, 125, 128, and 129 is roughly the same as for I. D. 124 (some will be higher, some lower), then the native population in 1966 for the Lesser Slave Lake area would be approximately 6,610.

Of this population, 2,552 were living on reserves or colonies (1967 records). The following table gives the population of each reserve and colony.

Table 1 POPULATION OF RESERVES AND COLONIES
 IN LESSER SLAVE LAKE AREA 1967 ^{2/}

<u>Reserve/Colony</u>	<u>Total Population</u>	<u>Population on Reserve/Colony</u>
Grouard	45	3
Sucker Creek	412	272
Driftpile	446	330
Swan River	135	91
Sawridge	39	29
Wabasca	1,095	682
Whitefish Lake	392	320
Gift Lake *	404	404
Big Prairie *	242	242
East Prairie *	<u>179</u>	<u>179</u>
Total	<u>3,389</u>	<u>2,552</u>

Population by age group for the three colonies and seven reserves are given in the following two tables:

* Metis colonies are asterisked throughout this section.

^{1/} Card, B. Y. et al.; The Metis in Alberta Society, University of Alberta, Edmonton, 1963.

^{2/} Abstracted from records of Metis Rehabilitation Branch, Alberta Department of Public Welfare and Indian Affairs Branch, Canada Department of Indian Affairs and Northern Development, special tabulation by author.

Table 2 POPULATION BY AGE GROUP FOR THE THREE METIS COLONIES OF THE LESSER SLAVE LAKE AREA 1965 ^{1/}

Age Group	Population	Percent
0-5	218	29.3
6-19	335	45.0
20-29	46	6.2
30-39	52	7.0
40-49	30	4.0
50-59	27	3.6
60-69	22	2.9
70+	15	2.0
Totals	745	100.0

Table 3 POPULATION BY AGE GROUPS FOR THE SEVEN INDIAN RESERVES OF THE LESSER SLAVE LAKE AREA 1966 ^{2/}

Age Group	Population	Percent
0-4	545	21.0
5-9	446	17.2
10-14	317	12.2
15-19	263	10.1
20-24	211	8.1
25-29	173	6.7
30-34	134	5.2
35-39	113	4.3
40-44	67	2.6
45-49	61	2.3
50-54	49	1.9
55-59	70	2.7
60-64	45	1.7
65-69	40	1.5
70-74	31	1.2
75-79	11	0.5
80-84	6	0.2
85-89	9	0.3
90-94	4	0.2
95-99	3	0.1
Totals	2,598	100.0

^{1/} Abstracted from records of Metis Rehabilitation Branch, Alberta Department of Public Welfare, and tabulated by author.

^{2/} Abstracted from records of Indian Affairs Branch, Canada Department of Indian Affairs and Northern Development, tabulation by author.

On colonies and reserves in the area, 63.5% of the population is under 20 years of age. The proportion of the population between age 20 and 70 is only 34.1% or 1,140 people. Since half of these people are women, 570 men will need to earn a living for 3,343 people.

The age group distribution indicated a high rate of growth for the native population. On Indian reserves in the area, the birth rate for 1967 was 49.9 per 1,000 compared to 20.9 for Alberta (1966). The mortality rate on these reserves was also higher (7.0 per 1,000) than for Alberta (6.6 per 1,000), and the average age at death for 1967 was only 43 years, while in 1965, the average age at death of Canadians generally was 62 for males and 65 for females. ^{1/}

Calculating on the basis of past trends, the population on colonies and reserves in the area for 1981 is projected to be 5,318. ^{2/} The population projected to 1981 for each colony and reserve is given in the following table.

Table 4 POPULATION ON RESERVES AND COLONIES ^{3/}
IN LESSER SLAVE LAKE AREA
1960 - 1981 (PROJECTED)

Reserve/Colony	1960	1967	1971	1981
Grouard	37	45	49	59
Sucker Creek	325	428	487	636
Driftpile	370	471	558	770
Swan River	115	136	147	178
Sawridge	35	39	39	41
Wabasca	924	1206	1370	1780
Whitefish Lake	307	421	503	705
Gift Lake*	281	404	498	728
Big Prairie*	250	242	226	166
East Prairie*	178	179	200	255
Totals	2822	3571	4077	5318

^{1/} Department of Vital Statistics; Annual Report 1965, Dominion Bureau of Statistics, Department of Trade and Commerce, Ottawa, 1966.

^{2/} Projections are made using a long term and short term average increase. Research Division; Population I - Trends, Provincial Planning Branch, Alberta Department of Municipal Affairs, July, 1967, p. 1.

^{3/} Abstracted from records of Metis Rehabilitation Branch, Albert Department of Public Welfare, and from records of Indian Affairs Branch, Canada Department of Indian Affairs and Northern Development, projections by author.

The following table gives the educational level of native adults in C. D. 15. Thirty-three point three percent have had no education, and only 0.8% have an education of Grade 10 or better. Assuming this distribution is true for the native people of the Lesser Slave Lake area, in 1961 out of approximately 3,305 adults (16 and up), 1,101 would have had no education and only 26 would have had Grade 10 or better.

Table 5 EDUCATIONAL LEVEL OF NATIVE ADULTS ^{1/}

C. D. 15, 1961		
Educational Level	Number	Percent
none	1,310	33.3
Pre 1	2	0.0
1-4	1,179	30.0
5-7	1,289	32.8
8-9	119	3.0
10	19	0.5
11	10	0.3
12	4	0.1
Some University	2	0.0
University Degree	1	0.0
Total	3,935	100.0

The drop-out rate of native school children in the Lesser Slave Lake area was 7.4% for 1966. It is nearly twice the Alberta average drop-out rate for the same year of 4.0%. Furthermore, native children are leaving school earlier than Albertaschool children: Before Grade 7, the rate is 10 times higher; for Grades 7 and 8 it is 20 times higher; and for Grade 9 it is 5 times higher. The details of drop-out rates are given in Tables 7 and 8.

^{1/} Census 1961. Unpublished Data, special tabulation by author.

On reserves and colonies of the area there are 876 children in school. The total number of school age children (6-20) in these communities is 1,321; therefore, 66.3% of school age children on reserves and colonies in the Lesser Slave Lake area are in school. The proportion of school age children attending school in Alberta is 82.7%. To reach the Alberta rate of school attendance on these colonies and reserves, 217 more children would need to attend school.

Table 6 SCHOOL ENROLLMENT ON RESERVES AND COLONIES ^{1/}
LESSER SLAVE LAKE AREA 1967

Reserve/Colony	School Enrollment
Grouard	13
Sucker Creek	94
Driftpile	100
Swan River	29
Sawridge	5
Wabasca	268
Whitefish Lake	98
Gift Lake*	114
Big Prairie*	92
East Prairie*	63
Total	876

Table 7 STUDENTS LEAVING SCHOOL FOR ALL DESTINATIONS ^{2/}
SELECTED SCHOOLS IN LESSER SLAVE LAKE AREA
WITH PREDOMINANTLY NATIVE ENROLLMENT, 1966

School	Enrollment	Total Leaving	Per cent Leaving
Utikuma	54	2	3.7
Gift Lake*	97	6	6.2
Atikameg	91	0	0.0
Trout Lake	34	2	5.9
Desmarais	226	31	13.7
Pelican Mount	34	1	2.9
Loon Lake**	29	0	0.0
Totals/Average	565	42	7.4

* 1967 data

** 1965 data

^{1/} Abstracted from records of Metis Rehabilitation Branch, Alberta Department of Public Welfare, and Canada Department of Indian Affairs and Northern Development, and tabulated by author

^{2/} Past school records, Northland School Division, 1966.

Table 8 STUDENTS LEAVING SCHOOL BEFORE GRADE 10 ^{1/}
ALBERTA SCHOOLS AND SELECTED SCHOOLS OF
LESSER SLAVE LAKE AREA WITH PREDOMINANTLY
NATIVE ENROLLMENT 1966

Grade	Selected Schools	Percent of Total Enrollment	Alberta	Percent of Total Enrollment
-7 boys	2		86	
girls	1		56	
total	3	0.53	142	0.04
7 boys	7		181	
girls	3		90	
total	10	1.77	271	0.07
8 boys	10		325	
girls	10		198	
total	20	3.54	553	0.15
9 boys	2		770	
girls	7		458	
total	9	1.59	1228	0.34
Totals boys	21		1392	
girls	21		802	
total	42	7.43	2194	0.61

The most abundant resource on Lesser Slave Lake colonies and reserves is agricultural potential. Of a total area of 602,701 acres, 176,000 are rated potentially arable.

Table 9 AGRICULTURAL RESOURCES OF RESERVES AND COLONIES ^{2/}
LESSER SLAVE LAKE 1967

Reserve/ Colony	Total Acreage	Cultivated	Potential Arable	Doubtful Arable	Pasture/ Woodland	Topography
Grouard	946	260	640	0	306	level
Sucker Creek	14,925	995	8,000	0	6,925	level
Driftpile	15,793	590	8,300	0	7,493	level
Swan River	10,796	480	6,100	0	4,690	level
Sawridge	5,332	400	600	0	4,732	level
Wabasca	51,785	50	8,000	0	51,785	level
Whitefish Lake	11,924	10	0	5,962	5,962	level
Gift Lake*	207,360	169	69,120	92,160	46,080	rolling
Big Prairie*	203,200	1,235	24,960	139,840	38,400	rolling
East Prairie*	80,640	873	58,240	5,760	16,640	level
Totals	602,701	5,062	175,900	243,722	183,019	

^{1/} Post school records, Northland School Division, 1966. (also Annual Report 1966)

^{2/} Abstracted from records of Indian Affairs Branch, Canada Department of Indian Affairs and Northern Development; and Metis Rehabilitation Branch, Alberta Department of Public Welfare and tabulated by author.

For a minimum annual income of \$4,000 in the Peace River District, a grain unit must be 600 acres ^{1/} and a ranching unit must have 160 animal units ^{2/}, and requires 4,000 acres of pasture and 640 acres of hay land. On this basis the total agricultural potential of the reserves and colonies would be for 265 units: 178 grain farms and 87 ranches. The following table gives the potential for each community.

Table 10 AGRICULTURAL POTENTIAL OF RESERVES AND COLONIES ^{3/}

IN LESSER SLAVE LAKE AREA					
Reserve/Colony	Grain Land (Acres)	Potential Units	Pasture (Acres)	Potential Units	Total Potential Units
Grouard	640	1	153	0	1
Sucker Creek	8,000	13	3,463	1	14
Driftpile	8,300	14	3,747	1	15
Swan River	6,100	10	2,348	0	10
Sawridge	600	1	2,366	0	1
Wabasca	0	0	25,892	6	6
Whitefish Lake	0	0	8,943	2	2
Gift Lake*	0	0	184,320	40	40
Big Prairie*	24,960	42	159,040	34	76
East Prairie*	58,240	97	14,080	3	100
Totals	106,840	178	404,352	87	265

The number of potential agricultural units on the Big Prairie and East Prairie colonies is greater than the present number of families living there, and even greater than the number of families projected for 1981. On the Gift Lake colony, however, the present number of families is 1 1/2 times the number of potential agricultural units, and the number of families projected to 1981 is 2 1/2 times the number of potential units. For the Indian reserves, the present number of families is six times the number of potential agricultural units, and the number of families projected to 1981 is ten times the potential units. This imbalance indicates a serious urgency for residents

- ^{1/} Bauer, L.; 1966 Alberta Farm Business Report, Farm Management Branch, Economics Division, Alberta Department of Agriculture 1966, p.47.
- ^{2/} Hackett, B.A.; 1966 Alberta Cow-Calf Enterprise Analysis, Farm Management Branch, Economics Division, Alberta Department of Agriculture, 1966, p. 36.
- ^{3/} Abstracted from records of Indian Affairs Branch, Canada Department of Indian Affairs and Northern Development, and Metis Rehabilitation Branch, Alberta Department of Public Welfare, and tabulated by author. Research Council of Alberta, Alberta Soil Services.

of the Gift Lake Metis colony and of Indian reserves in the Lesser Slave Lake area either to find other sources of livelihood on or near their reserves or to prepare for moving to where opportunities exist.

Table 11

AGRICULTURAL POTENTIAL COMPARED WITH NUMBER OF FAMILIES ^{1/}
(PRESENT AND PROJECTED 1981) ON RESERVES AND COLONIES
LESSER SLAVE LAKE AREA

Colony/Reserve	No. of Potential Agricultural Units	Present No. of Families	Projected No. of Families
Grouard	1	6	8
Sucker Creek	14	59	91
Driftpile	15	64	110
Swan River	10	19	25
Sawridge	1	6	6
Wabasca	4	156	254
Whitefish Lake	2	56	101
Gift Lake*	40	58	104
Big Prairie*	76	35	24
East Prairie*	100	26	36
Totals	263	485	759

There are 60 men farming an average of 72 acres per farm on the reserves and colonies. The following table gives the details:

Table 12 FARMING ON RESERVES AND COLONIES ^{2/}
LESSER SLAVE LAKE AREA 1967

Reserve/Colony	No. of Farmers	Total Acreage	Average Acreage
Grouard		(260)*	
Sucker Creek	5	995	199
Driftpile	5	590	118
Swan River	2	480	240
Sawridge		(70)*	
Wabasca	2	70	35
Gift Lake*	3	204	68
Big Prairie*	18	1,227	68
East Prairie*	25	771	31
Totals/Average	60	4,337	72

* Agricultural leases.

^{1/} Estimates made by Rural Development Research Branch.

^{2/} Abstracted from records of Indian Affairs Branch, Canada Department of Indian Affairs and Northern Development, and Metis Rehabilitation Branch, Alberta Department of Public Welfare, and tabulated by author.

Small scale ranching is carried on on these reserves and colonies. Twenty-seven ranchers keep an average of eighteen cattle each.

Table 13

RANCHING ON RESERVES AND COLONIES ^{1/}
LESSER SLAVE LAKE AREA 1967

Reserve/Colony	No. of Ranchers	Total No. of Cattle	Average No. of Cattle
Sucker Creek	5	60	12
Driftpile	3	55	16
Swan River	1	56	56
Wabasca	5	95	19
Whitefish Lake	1	2	2
Gift Lake*	3	141	47
Big Prairie*	2	16	8
East Prairie*	7	54	8
Totals/Average	27	479	18

A total of 6.7 million board feet of lumber is cut on colonies and reserves in the area (6.2 MM fbm on the three colonies) for an income of \$113,613.

Table 14 LUMBERING ON COLONIES AND RESERVES ^{2/}
LESSER SLAVE LAKE AREA 1966-67

Reserve/Colony	Lumber	Income
Bigstone	500,000 fbm	\$ 35,000
	1,000 cords	10,000
Gift Lake*	2,089,700 fbm	17,762
Big Prairie*	1,040,541* fbm	23,662
	1,755 cords	
East Prairie*	3,073,543* fbm	27,189
	133 cords	
Totals	6,703,784 fbm	\$113,613
	2,888 cords	

* Logging only

^{1/} Abstracted from records of Indian Affairs Branch, Canada Department of Indian Affairs and Northern Development, and Metis Rehabilitation Branch, Alberta Department of Public Welfare, and tabulated by author.

^{2/} Ibid.

Several native people in the area are active in fishing and trapping. Incomes from these occupations are quite low. On Indian reserves, an average annual income is \$213 for trapping and \$617 for fishing.

Table 15 TRAPPING ON RESERVES ^{1/}
LESSER SLAVE LAKE AREA 1966-67

Reserve	No. of Trappers	Total Annual Income	Average Annual Income
Sucker Creek	16	\$ 4,800	\$300
Driftpile	25	4,000	160
Swan River	15	3,000	200
Wabasca	119	24,000	202
Whitefish Lake	40	10,000	250
Totals/Average	215	\$45,800	\$213

Table 16 FISHING ON RESERVES ^{2/}
LESSER SLAVE LAKE AREA 1966-67

Reserve	No. of Fishermen	Total Annual Income	Average Annual Income
Sucker Creek	33	\$20,000	\$ 606
Wabasca	5	2,500	500
Whitefish Lake	1	1,000	1,000
Totals/Average	39	\$23,500	\$ 603

The total welfare cost of the seven reserves (population on reserves only) and three colonies in 1966-67 was \$230,040. This represents a per family welfare cost of \$628.

^{1/} Abstracted from records of Indian Affairs Branch, Canada Department of Indian Affairs and Northern Development, and tabulated by author.

^{2/} Ibid.

Table 17

WELFARE PER FAMILY ON RESERVES AND COLONIES ^{1/}
IN THE LESSER SLAVE LAKE AREA 1966-67

Colony/Reserve	No. of Families on Colony/Reserve	Welfare	Welfare/Family
Grouard	1	0	0
Sucker Creek	39	\$ 19,440	\$498
Driftpile	47	20,760	442
Swan River	13	9,120	701
Sawridge	4	0	0
Wabasca	97	85,176	878
Whitefish Lake	46	35,100	763
Gift Lake*	58	22,693	391
Big Prairie*	35	20,895	597
East Prairie*	26	16,856	648
Totals/Average	366	\$230,040	628

Data on housing is available separately for colonies and reserves. On the three colonies 37.0% of families have a standard frame house designed by the Metis Branch. Another 53.4% have frame or log houses designed and built by themselves. Nine point six percent of families live with friends or relatives.

Table 18 HOUSING ON METIS COLONIES ^{2/}
LESSER SLAVE LAKE AREA, 1967

Colony	Families with Metis Branch Standard Frame House		Families with other Frame House		Families with Log House		Families with no House*		Total Families	
	No.	%	No.	%	No.	%	No.	%	No.	%
Big Prairie	11	31.4	8	22.9	12	34.3	4	11.4	35	100.0
Gift Lake	29	44.6	13	20.0	17	26.2	6	9.2	65	100.0
East Prairie	10	28.6	11	31.4	11	31.4	3	8.6	35	100.0
Totals	50	37.0	32	23.7	40	29.7	13	9.6	135	100.0

* Families living with relatives or friends.

^{1/} Abstracted from records of Metis Rehabilitation Branch, and Indian Affairs Branch. Special tabulation Rural Development Branch. Welfare includes food and clothing for Indian reserves and food, clothing, medical care, and wages from government works program on Metis colonies.

^{2/} Abstracted from records of Metis Rehabilitation Branch, Alberta Department of Public Welfare, and tabulated by author.

On Indian reserves, 17.2% (44 houses) of homes are in poor condition, and need to be rebuilt. If it may be assumed that for the average Indian family of seven, a six-room house is required, an additional 191 houses are undersized, requiring enlargement.

Table 19 HOUSING ON RESERVES ^{1/}
LESSER SLAVE LAKE AREA 1967

Reserve	Good		Fair		Poor		Total	
	No.	%	No.	%	No.	%	No.	%
Grouard	1	100.0					1	100.0
Sucker Creek	31	83.8	2	5.4	4	10.8	37	100.0
Driftpile	29	58.0	9	18.0	12	24.0	50	100.0
Swan River	8	50.0	2	12.5	6	37.5	16	100.0
Sawridge	3	60.0			2	40.0	5	100.0
Wabasca	85	75.9	14	12.5	13	11.6	112	100.0
Whitefish Lake	9	26.5	18	52.9	7	20.6	34	100.0
Total	166	65.1	45	17.6	44	17.2	255	100.0

Table 20 SIZE OF HOUSES ON RESERVES ^{2/}
LESSER SLAVE LAKE AREA 1967

No. of Rooms Reserve	1		2		3		4		5		6		7		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Grouard					1	100.0									1	100
Sucker Creek	1	2.7	2	5.4	8	21.6	5	13.5	13	35.1	5	13.5	3	8.1	37	100
Driftpile	4	8.0	2	4.0	20	40.0	5	10.0	12	24.0	3	6.0	4	8.0	50	100
Swan River			2	12.5	4	25.0	2	12.5	5	31.2	3	18.8			16	100
Sawridge	1	20.0	1	20.0					1	20.0			2	40.0	5	100
Wabasca	9	8.0	24	21.4	51	45.5	10	8.9	18	16.1					112	100
Whitefish Lake	5	14.7	8	23.5	3	8.8	13	38.2	5	14.7					34	100
Totals	20	7.9	39	15.3	87	34.1	35	13.7	54	21.2	11	4.3	9	3.5	255	100

^{1/} Abstracted from records of Indian Affairs Branch, Canada Department of Indian Affairs and Northern Development, and tabulated by author.

^{2/} Ibid.

Summary

The native population of the whole area for 1961 is estimated at 6,610, or 44.4% of the total. At present growth rates the native population could reach 20,543 by 1981, which would be 50.5% of the total.

The native people show a very high birth rate of 3.8% compared to 2.1% for Alberta. This is a major contributing factor to the lower percentage (34.1%) of people in their productive years (20-70). The mortality rate for natives of the area is slightly below the rate for Alberta, however, the average age at death for natives of this area is 43 years.

Adult education levels of these people is extremely low. Only 0.8% of the adults have Grade 10 or better. This situation is perpetuated by two factors. A large percentage of children leave school and at an earlier age than average for Alberta and only 66.3% of school age children attend school.

Economic enterprises among the native people are on a small scale, too small to provide an adequate income. The average number of cattle per rancher, for example, is 18, and trappers earn an average of only \$213 per year.

On reserves, the population is already 6 times what can be supported by agriculture, and by 1981 it is projected to be 10 times. Other occupational opportunities must be found, either in the area or elsewhere.

An indication of socio-economic well-being is given by the amount of welfare per family. Among treaty Indians and Metis on colonies each family receives an average of \$628 in welfare per year. Over the last 3 years, welfare payments to families on Metis colonies have increased 33%.

Improvement of housing is an outstanding need. On colonies, 37% of families have a standard Metis Branch house. Among treaty Indians 44 houses need rebuilding and another 191 should be enlarged.

RECREATION AND TOURISM IN THE
LESSER SLAVE LAKE AREA

by

Jerry F. Bigam

RECREATION AND TOURISM IN THE
LESSER SLAVE LAKE AREA

The Lesser Slave Lake area has a number of natural features which could provide a basis for major recreational developments. A brief outline of these is presented below:

Water-Based Recreation

The following summarizes the quality and quantity of lake shoreline available for development in the central part of the area.^{1/}

Table 1 MILES OF SHORELINE BY CLASS
 IN THE LESSER SLAVE LAKE AREA

	In Miles	
	<u>Area Shoreline</u>	<u>Lesser Slave Lake Shoreline</u>
Class 1	9	8
Class 2	9.6	5.0
Class 3	59.0	35.0
Class 4	59.0	17.2

Class 1 shoreline is the highest quality resource, Class 2 shoreline requires minor improvements to realize potential, Class 3 requires fairly significant improvements and Class 4 requires major capital inputs to realize potential. The last two classes lend themselves to cottage and boating activities, while the first two classes are suitable for swimming as well. The above table should indicate the importance of Lesser Slave Lake to any tourist and recreation development.

By way of comparison with some of the better-known lakes near populated areas like Lake Wabumun, which has no Class 1 shoreline but still attracts 20,000 visitors on many Sundays during the summer. Similarly Gull Lake and Sylvan Lake have no Class 1 shoreline but still attract

^{1/} Includes lakes north of township 80 such as North Wabasca, Graham and Peerless.

around 10,000 many weekends. The main reasons for the high levels of use are: 1) all are within 1½ hours driving time from at least one of the cities, 2) all have established picnic, camping and trailer facilities, and 3) all are well known.

It is important to note that the same natural conditions which formed the Class 1 beaches on Lesser Slave Lake are also a detriment to development, that is, the prevailing west winds create currents from west to east in the lake, and this tends to build up sand deposits on the southeastern edge. These winds can quickly churn up very rough water which makes boating dangerous and swimming unpleasant.

The biggest obstacle to development is the distance problem and the lack of a paved road all the way into the area.^{1/} The area is too far from (taking the existing road into consideration) Edmonton to attract week-end visitors, and does not have the facilities to attract holidayers. Once the highway is paved to High Prairie from Slave Lake, there should be an increase in traffic which should, in turn, result in increased knowledge of the recreational potential and subsequently, increased use.

Sports Fishing

The area including Lesser Slave Lake and northward, contains a number of lakes which abound with pike, pickerel, and lake whitefish. Lake trout are found in a few of these lakes as well. The major obstacle to any sports fishery development is the lack of good access roads. In addition, the area south of Lesser Slave Lake has few large lakes. However, trout and mountain whitefish are found in a network of the creeks and rivers throughout the region. Access to these creeks and rivers in the south is fairly good

^{1/} The highway will likely be paved to Slave Lake by 1969.

since oil exploration has been underway there for the past ten years.

Big Game Hunting

Large populations of moose are present in the area and have been lightly harvested during past years. In 1967, a program to attract non-resident moose hunters was undertaken by the Fish and Wildlife Division, with the result that 10,000 non-resident hunters came to Alberta. A similar program will be implemented this year, except that licence fees will be increased in an effort to reduce the number of expected hunters. It was evident that guiding, camping and other facilities were not adequate to handle this large influx. ^{1/}

The estimated moose population in the area south of Lesser Slave Lake is 5,600, while in the northern part of the area the population is estimated at 11,700. The annual harvest in the former area is estimated to be 1,400 while in the latter, 2,900. Based on expenditure surveys from 1967, the harvest of 4,300 animals would involve the expenditures of from \$860,000 to \$1,376,000 ^{2/}; perhaps 50% of this within the area.

There are small populations of deer, elk, and caribou in the area as well as fairly large numbers of bear. Grizzly bears are also present but these have been protected for the last few years as they are the last survivors of a particular species.

Bird Hunting

At the present time, the inventories of upland birds are very high. However, these populations follow a ten year cycle which is presently at its peak. In one or two years, the populations will decrease rapidly.

The area offers fairly good duck hunting, especially for canvass backs

^{1/} By the fall of 1968, over 60 people in the area had taken out guiding licences.

^{2/} If all taken by resident hunters, the expenditure would have been \$860,000; if all taken by non-residents, the expenditure would have been \$1,376,000.

and redheads. Utikuma Lake is a staging ground for these birds so that from 250,000 to 500,000 ducks congregate there in the fall for the flight south. Mallards and geese are also present in relatively small numbers.

Present tourist facilities are summarized below:

ACCOMODATIONS IN LESSER SLAVE LAKE AREA

	<u>Hotels</u>		<u>Motels</u>	
	<u>No.</u>	<u>Rooms</u>	<u>No.</u>	<u>Units</u>
Slave Lake	1	24	6	49
Faust	1	16	-	-
Kinuso	1	22	1	Closed
Canyon Creek	1	12	-	-
High Prairie	2	56	2	33
Swan Hills	1	18	1	20

The following is a list of camping facilities:

1. Lesser Slave Lake Provincial Park -
2. Lands and Forests Recreation Areas - Wabasca, Snipe Lake, Freeman Lake
3. Department of Highways Campsites - five roadside camping areas.

In summary, the area has an excellent potential for recreation and tourism. In the former instance, the resource is being lightly utilized by big game and bird hunters and sports fishermen, the latter resource has been neglected almost entirely. Whether a significant rise in the demand for these resources can be stimulated by better access facilities and advertising remains a question.

